







MEMBERS



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THE  
FAMILY AND SHIP  
MEDICINE CHEST COMPANION:  
BEING A COMPENDIUM OF  
DOMESTIC MEDICINE,  
SURGERY, AND MATERIA MEDICA;  
WITH  
DIRECTIONS FOR THE DIET  
AND  
MANAGEMENT OF THE SICK-ROOM;  
PARTICULARLY ADAPTED FOR  
HEADS OF FAMILIES, CAPTAINS OF SHIPS, TRAVELLERS, AND  
OVERSEERS OF PLANTATIONS;  
COMPRISING  
PLAIN RULES FOR THE ADMINISTRATION OF MEDICINES,  
WITH  
THEIR PROPERTIES AND DOSES.  
ALSO  
GENERAL RULES ON BATHING,  
A PLAIN DESCRIPTION OF THE TREATMENT OF FRACTURES  
AND DISLOCATIONS, ETC., ETC.,  
AND  
A CONCISE ACCOUNT OF THE ASIATIC AND  
SPASMODIC CHOLERA,  
WITH THE  
REMEDIES TO BE USED IN THE ABSENCE OF  
PROFESSIONAL ASSISTANCE.  
TO WHICH IS ADDED  
RECEIPTS OF GENERAL UTILITY FOR FAMILY PURPOSES.  
SELECTED FROM STANDARD WORKS  
BY A PRACTISING PHYSICIAN.

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## PUBLISHERS' PREFACE.

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THE original design of the Publishers was to offer to the Public a reprint of Savory's Compendium of Domestic Medicine. Upon examination, however, it was found to contain much that was deemed unimportant, while it was deficient in other matters which would render it useful to sea captains and owners of plantations. It was determined, therefore, to cull from it and several other works of a like character and equal reputation, such material as would make a reliable companion to the family and sea medicine chest. With this object they have selected the matter from the following sources, viz.: Savory's Compendium of Domestic Medicine; Dinneford and Earland's Medicine Directory; Coxe's Companion to the Sea Medicine Chest; Household Surgery, or Hints on Emergencies, by J. F. South; The Management of the Sick-room, by A. T. Thomson, M.D.; The Maternal Management of Children,

by Thomas Bull, M.D., and The Pocket Formulary, by Henry Beasely. In many places the source of the indebtedness has been acknowledged in the body of the work; in others it was impossible to do so; the Publishers therefore make their acknowledgment in this place.

The object of the work, thus compiled, is to afford assistance to those who are removed from Medical or Surgical aid, but in *no way* to delegate the treatment and care of the sick to the inexperienced, when other assistance can be obtained; let not its object, therefore, be misunderstood.

The descriptions of diseases and medicines are made as plain and intelligible as possible, but to aid those who are ignorant of medical terms, a short glossary of the most common, is appended to the work.

# CONTENTS.

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## CHAPTER I.

	PAGE
DOMESTIC PHARMACOPŒIA, - - - - -	13
TABLE OF DOSES, WEIGHTS, AND MEASURES, - - - - -	13
MEDICAL TERMS, - - - - -	18
ADMINISTRATION OF MEDICINES, - - - - -	24
DRUGS, CHEMICALS, ETC., - - - - -	26

## CHAPTER II.

DOMESTIC MEDICINE, - - - - -	114
------------------------------	-----

## CHAPTER III.

INFANTILE DISEASES, - - - - -	167
-------------------------------	-----

## CHAPTER IV.

MANAGEMENT OF CHILDREN IN HEALTH, - - - - -	187
MATERNAL NURSING, - - - - -	187

THE DUTY AND ADVANTAGES OF THE MOTHER NURSING HER INFANT,	187
OF MOTHERS WHO OUGHT NOT TO SUCKLE, - - -	189
RULES FOR NURSING THE INFANT, - - - - -	192
RULES FOR THE HEALTH OF THE NURSING MOTHER, - - -	198
INJURIOUS EFFECT UPON THE MOTHER AND INFANT OF UNDUE AND PRO-	
TRACTED SUCKLING, - - - - -	203
WEANING, - - - - -	205
OF WET-NURSES, - - - - -	207
ARTIFICIAL FEEDING, - - - - -	213
DIET OF CHILDHOOD, - - - - -	222

## CHAPTER V.

GENERAL MANAGEMENT OF INFANTS UP TO THE SECOND YEAR, AND OF	
CHILDREN UP TO THE EIGHTH, - - - - -	231

## CHAPTER VI.

DOMESTIC SURGERY, - - - - -	256
BURNS AND SCALDS, - - - - -	259
CORNS AND BUNIONS, - - - - -	261
DISLOCATIONS, - - - - -	262
FRACTURES (SIMPLE), - - - - -	267
FRACTURES, (COMPOUND), - - - - -	277
SPRAINS, - - - - -	281
WOUNDS, - - - - -	282
RUPTURES, - - - - -	285
PILES, - - - - -	288
PROTRUDING BOWEL, - - - - -	290
WHITLOW, - - - - -	291
INGROWING NAIL, - - - - -	292
INFLAMMATION OF THE EYE, - - - - -	293
PUSTULES ON THE EYE, - - - - -	294
MILK ABSCESS, - - - - -	295
SORE NIPPLES, - - - - -	296
IRRITABLE BREAST, - - - - -	297
MANAGEMENT OF HEMORRHAGES, - - - - -	297

## CHAPTER VII.

VENEREAL DISEASE, - - - - -	301
-----------------------------	-----

## CHAPTER VIII.

MEDICAL RESOURCES, OR WHAT TO DO IN CASES OF EMERGENCY,	312
POISONING, - - - - -	315
HYDROPHOBIA, - - - - -	319
VENOMOUS SERPENTS, - - - - -	321
RECOVERY FROM NOXIOUS VAPOURS, - - - - -	323

## CHAPTER IX.

MEANS OF FUMIGATING INFECTED APARTMENTS, AND PREVENTING THE PROGRESS OF CONTAGIOUS DISEASES, - - - - -	324
---	-----

## CHAPTER X.

INQUIRIES CONCERNING THE SICK-ROOM, - - - - -	327
QUALIFICATIONS OF A SICK-NURSE, - - - - -	337
PROGNOSTICS, - - - - -	348
DIRECTIONS RESPECTING THE MANAGEMENT OF CONVALESCENCE, AND OF DIET IN DISEASE AND CONVALESCENCE, - - - - -	351
GENERAL DISEASES, - - - - -	363

## CHAPTER XI.

COOKERY FOR THE SICK-ROOM, - - - - -	381
--------------------------------------	-----

## CHAPTER XII.

BATHING, - - - - -	394
GENERAL OBSERVATIONS ON, - - - - -	394
DIFFERENT KINDS OF BATH, - - - - -	395

## CHAPTER XIII.

GLOSSARY OF MEDICAL TERMS, - - - - -	406
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# DOMESTIC PHARMACOPŒIA.

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It is not at all wise or desirable to take the professional treatment of disease from the skill of the medical practitioner, but, as much mischief results from giving, through want of knowledge, injudicious doses of medicine, it is evident that a Domestic Pharmacopœia, containing plain and accurate directions for preparing, compounding, and administering the most generally useful remedies, is likely to assist the wishes of the physician, and promote the welfare of the sick.

The doses mentioned are intended for adults. The proportionate doses for children may be estimated from the table of doses.

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## TABLE OF

### DOSES, WEIGHTS, AND MEASURES.

As many persons may be unacquainted with the characters marked on the weights and graduated measures, the following explanation may be useful:—

*℥i one ounce.	℥ss half a drachm.
℥ss half an ounce.	℥i one scruple.
℥i one drachm.	℥ss half a scruple or ten grains.

The grain weights are stamped with punch marks indicative of the number of grains each is equivalent to; and the following is their order according to the table of Apothecaries' weight:—

\* When the letter *f* is prefixed to the sign, it means a fluid ounce by measure.

20 grains make 1 scruple.	60 drops make 1 fluid-drachm.
3 scruples " 1 drachm.	8 drachms " 1 fluid-ounce.
8 drachms " 1 ounce.	16 ounces " 1 pint.

Apothecaries' weights, by which all medicinal preparations ought to be weighed, are divided into pounds, ounces, drachms, scruples, and grains.

℔	The pound	} contains {	twelve ounces.
3	ounce		eight drachms.
3	drachm		three scruples.
9	scruple		twenty grains.

Apothecaries' measure, by which all medicines are compounded, consists of pints, ounces, drachms, and minims.

0	The pint	} contains {	sixteen ounces.
3	ounce		eight drachms.
3	drachm		sixty drops, or minims.*

Drop . . . . .	gtt
Minim. . . . .	ʒ
Grain . . . . .	gr
$\frac{1}{2}$ Scruple . . . . .	ʒss
Scruple . . . . .	ʒj
$\frac{1}{2}$ Drachm . . . . .	3ss
Drachm . . . . .	3j
$\frac{1}{2}$ Ounce . . . . .	3ss
Ounce . . . . .	3j

āā, or ana, of each.

Coch. (cochleare), a spoonful.

Coch. magn., a table-spoonful.

Coch. parv., a tea-spoonful.

N.B. A modern table-spoon contains about five drachms; a tea-spoon, one drachm; a dessert-spoon, three drachms; and a wine-glass, two ounces. In consequence of spoons varying so much in size, they ought not to be used as measures for the exhibition of potent medicines.

\* When the London College of Physicians directed the dropping of fluids from bottles to be discontinued, on account of the uncertainty of the dose prescribed (much depending on the size of the bottle, and the quality and quantity of the fluid contained in it), and the minim to be substituted for the drop, they ought to have cautioned the dispensers of medicines against considering these terms *synonymous*, for there is a considerable difference between them, the former exceeding the latter by at least one half: thus, for instance, ten *minims* by measure, of laudanum, will amount to fifteen drops, whereas ten *drops* will be equal only to seven minims and a half. This, of course, would be of the greatest consequence in all active medicines; such, for instance, as laudanum, solutions of morphia, prussic acid, &c.

The following articles are necessary to the proper dispensing of medicines requiring accurate preparation, measuring, weighing, administering, &c.

A spatula, for spreading salves, making pills, &c.

A small glass slab.

A glass funnel.

A pestle and mortar.

A set of scales and weights.

An enema apparatus.

A two-ounce graduated measure.

Minim measure.

A graduated wine-glass for measuring tea and table-spoonfuls of liquids.

MINIM MEASURE.

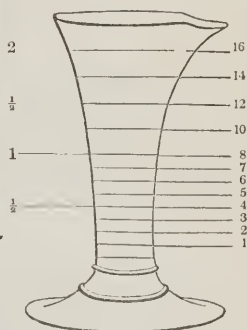
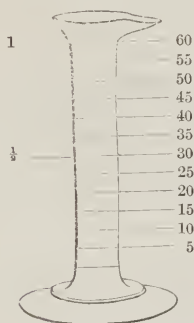
TWO-OUNCE MEASURE.

f 3 drachm.

minims.

3 ounce.

3 drachm.



THE APPROXIMATE VALUE OF FRENCH DECIMAL WEIGHTS.

One centigramme is equal to . . .	$\frac{1}{4}$ grain.
Two centigrammes . . . . .	$\frac{1}{2}$ grain.
One demi-decigramme . . . . .	1 grain.
One decigramme . . . . .	2 grains.
One gramme . . . . .	18 grains.
One gramme and three decigrammes	1 scruple.
Two grammes . . . . .	$\frac{1}{2}$ drachm.
Four grammes . . . . .	1 drachm.
One decagramme . . . . .	2 drachms and 36 grains.
Three decagrammes and two grammes	1 ounce.
Demi-kilogramme. . . . .	1 pound.
Kilogramme . . . . .	2 pounds.

N. B. At Paris, the scruple is equal to 24 grains, the drachm to 72 grains. Everywhere else the scruple is equal to 20 grains, and the drachm to 60 grains.

## THE DOSES OF MEDICINE

ADAPTED TO DIFFERENT AGES.

For an adult, suppose the dose to be . . .						ONE, or 1 drachm.
Under	1	year	will	require	only	. . . 1-12th or 5 grains.
"	2	"	"	"	"	. . . 1-8th or 8 grains.
"	3	"	"	"	"	. . . 1-6th or 10 grains.
"	4	"	"	"	"	. . . 1-4th or 15 grains.
"	7	"	"	"	"	. . . 1-3d or 1 scruple.
"	14	"	"	"	"	. . . 1-half or $\frac{1}{2}$ drachm.
"	20	"	"	"	"	. . . 2-3ds or $\frac{2}{3}$ scruples.
Above	21	"	"	"	"	. . . one or 1 drachm.
"	65	"	"	"	"	the inverse gradation of the above.

In the same manner for fluids, divide the quantity suited for an adult by the above fractional parts. If for a child under one year, the dose will be one-twelfth; under two years, one-eighth; under three years one-sixth, and so on.

The method of apportionment of Dr. Young is as follows: "For children under twelve years of age, the doses of medicine must be diminished in the proportion of the age to the age increased by twelve; thus, at two years, to  $\frac{1}{7}$ :—viz.:  $\frac{2}{2+12} = \frac{1}{7}$ . Some exceptions are offered to this rule in the case of certain medicines. Such are castor oil and calomel, a certain quantity of which will in general not produce a greater effect in a child two or three years of age than double the quantity in an adult.

There are certain general circumstances influencing the operation of medicines, which require to be attended to in apportioning the dose. The most important of these are Sex, Temperament, Idiosyncrasy, Habit, and Disease.

**SEX.**—Women in general require rather smaller doses of any active medicine than men; a difference which is probably owing to their greater sensibility, and to their habits of life.

**TEMPERAMENT.**—By temperament is understood a predisposition, derived from original conformation, to be affected in a peculiar manner by external causes acting on the system. With regard to the influence of different temperaments in the operation of medicines, those of the sanguine are supposed to be more easily affected, and, therefore, to require smaller doses than those of the phlegmatic or melancholic. There is, however, on this subject so much uncertainty and hypothesis, that little reliance can be placed on it.

**HABIT.**—This has an important influence on the operation of medicines. In general, habit diminishes the effect resulting from the action of external powers on the system; hence medicines

lose power by being continued. This is particularly the case with stimulants and narcotics, and the doses of them, therefore, require to be increased when their use is protracted.

DISEASE.—The influence of disease on the operation of medicines admits of no *general* observations. The directions of the medical attendant will, of course, here be followed.

CLIMATE.—The influence of climate, in modifying the action of medicines, operates in two ways: first, by the changes which climate causes in the animal frame; secondly, by the changes which it occasions in medicinal agents of a vegetable origin.

IDIOSYNCRASY.—Denotes that disposition in individuals, unconnected with general temperament, to be affected by certain causes, in a manner different from the generality of mankind. Where such peculiarities exist with regard to medicines, they require attention.

STATE OF THE STOMACH AND IDIOSYNCRASY.—Constitutional peculiarities, or idiosyncrasies, will sometimes render the operation of the mildest medicine poisonous. Idiosyncrasy cannot, like temperament, be recognised by exterior signs, but can be known to the physician only by an intimate acquaintance with the constitution of those in whom it occurs. It ought to be discovered by the physician; otherwise the most important and even dangerous results may follow the use of medicines which, although in general they operate in a manner well known, yet, in peculiar idiosyncrasies, produce effects the most opposite to those which might be anticipated.

“In prescribing,” (says Dr. A. T. Thomson,) “the practitioner should always so regulate the intervals between the doses, that the next dose may be taken before the effect produced by the first is altogether effaced; for, by not attending to this circumstance, the curc is always commencing, but never proceeding. It should, however, also be kept in mind that medicines such as the mercurial salts, arsenic, digitalis, &c., are apt to accumulate in the system, and danger may hence arise if the doses too rapidly succeed each other. The action, also, of some remedies, elaterium and iodine, for example, continues long after the remedy is left off; and, therefore, much caution is requisite in avoiding too powerful an effect, by a repetition of them even in diminished doses.”

# MEDICAL TERMS.

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## ABSORBENTS.

A TERM applied to medicines which are themselves inert, or nearly so, but which absorb or combine with acid matter in the stomach or bowels. Chalk or magnesia, for instance, are absorbents.

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## ACIDS.

This term is applied to substances which have a sour taste, and redden vegetable blue colours. In medicine the acids are an important class of remedies: some of them, when duly diluted, are powerful tonics, astringents, and refrigerants, others laxative.

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## ALKALIES.

This term comprehends under it substances of a peculiar acrid taste, soluble in water, capable of neutralizing the acids, and of converting many vegetable blue colours to green, yellows to brown, and certain reds to blue. This term is usually limited to potassa, or the vegetable alkali; soda, or the mineral alkali; and ammonia, or the volatile alkali.

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## ANODYNES.

(See Narcotics.)

## ANTACIDS.

Antacids are medicines which correct acidity of the stomach and digestive organs, by combining chemically with the free acid existing there, and neutralizing it. Their action is manifestly only temporary and palliative, as they do not correct that peculiar state of the digestive organs which favours the formation of acid; and their continued use produces a precisely similar disease of the alimentary canal. Antacids should be administered early in the morning, and sometimes before a meal during the day. (See Soda, Potash, and Magnesia, for the best forms of taking Antacids.)

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## ANTHELMINTICS.

Remedies against worms. (See Pink Root, Scammony.)

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## ANTILITHICS.

Remedies against stone.

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## ANTISEPTICS.

Remedies against putrefaction. (See Kreosote, Vinegar.)

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## ANTISPASMODICS.

(See Æther, Camphor, Spirit of Lavender.)

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## CARMINATIVES.

Medicines which stimulate the muscular coat of the stomach and bowels, and expel flatulency, are called Carminatives. The following is a good carminative mixture in flatulency: take of—

Oil of Aniseed . . . . .	15 drops.
Purified Sugar . . . . .	$\frac{1}{2}$ drachm.

Triturate these well together, and then add—

Spirit of Carraway. . . . .	1 ounce.
Compound Spirit of Lavender . . . . .	1 drachm.
Water . . . . .	4 ounces.

Mix. A tablespoonful to be taken three times a day.

## CATHARTICS OR APERIENTS.

Under this head are comprehended those medicines which stimulate the intestines, and produce increased alvine evacuations. Great caution is necessary against the too frequent use of purgatives. Independently of the irritation which they keep up in the intestinal canal, they tend to impair digestion, by causing the secretion of imperfect bile. If purgatives be prescribed in disease, caution is requisite to avoid exposing the invalid to the influence of cold air. When the Saline Cathartics and castor oil are prescribed, their action is greatly quickened by diluting freely with warm demulcent fluids. When the Cathartic is given in the form of pill, the operation is always long commencing, in which case diluents are not required until after the first evacuation. (See Calomel.)

### CATHARTIC DRAUGHT.

Infusion of Senna . . . . .	1 ounce.
Tincture of Senna . . . . .	1 drachm.
Tincture of Jalap . . . . .	1 drachm.
Tartrate of Potash . . . . .	1 drachm.
Syrup of Senna . . . . .	1 drachm.

Mix. To be taken early in the morning, for dyspeptic costiveness.

### LAXATIVE AND STOMACHIC PILLS.

(SIR H. HALFOURD.)

Rhubarb . . . . .	15 grains.
Myrrh. . . . .	15 grains.
Aloes . . . . .	6 grains.
Extract of Camomile . . . . .	$\frac{1}{2}$ drachm.
Oil of Cloves . . . . .	2 drops.

Mix, and divide into twenty pills. Take two before dinner, occasionally.



## DEMULCENTS.

Medicines which are used to obviate and prevent the action of acid and stimulating matters. As they are usually of no great power, they may be taken in as great quantities as the stomach will bear. When cough is present they should be taken after coughing, for, as that spasmodic effort throws off the secretion formed on the inflamed mucous surface, the condition of the membrane is then much more likely to be benefited by their influence than at any other time. The following is a useful and not unpleasant Demulcent, and may be taken *ad libitum*. Take of—

Marshmallow Root . . . . .	4 ounces.
Stoned Raisins . . . . .	2 ounces.
Water . . . . .	5 pints.

Boil to three pints, and strain. (See also Gum, Linseed.)

## DIAPHORETICS

Are medicines which, being taken internally, increase the discharge by the skin. Between Diaphoretics and Sudorifics there is little distinction, the operation in both cases being the same, and differing only in degree. A Sudorific is merely an augmentation of the dose, and produces sweating. The effect of Diaphoretics should be kept up by the free administration of tepid fluids or diluents. During their action confinement to bed is essential, but the bed coverings should be light blankets, as these are the best non-conductors of heat, and heavy coverings tend to check perspiration. (See Dover's Powders, James's Powders, Mindererus Spirit.)

## DIURETICS.

Medicines which augment the secretion of urine. Their success is, however, too precarious for them to be employed by an unprofessional person. When these are *prescribed*, the surface of the body of the invalid should be kept cool, otherwise they are apt to operate as diaphoretics. On this account the patient is generally kept out of bed, and the medicine administered only during the daytime. (See Buchu, Sweet Spirit of Nitre.)

## EMETICS.

(See Ipecacuanha.)

## EMMENAGOGUES.

Remedies which induce the catamenial discharge. The following is an effective Emmenagogue. Take of—

Tincture of Aloes . . . . .	$\frac{1}{2}$ ounce.
Tincture of Muriate of Iron . . . . .	$\frac{1}{2}$ ounce.
Tincture of Valerian . . . . .	1 ounce.

Mix, and take a teaspoonful, in camomile tea, two or three times a day.

## EXPECTORANTS, OR PECTORALS,

Are those medicines which are employed in various pulmonary disorders to promote the expulsion of mucus from the air-tubes in diseased conditions of the lungs. It is too common to prescribe this class of medicines without consulting the physician. Many expectorants are stimulants, and much mischief may result from their indiscriminate use. The following cough linetus is often useful:—

Syr. Squills . . . . .	$\frac{1}{2}$ ounce.
Syr. Ipecac. . . . .	$\frac{1}{2}$ ounce.
Sulphate of Morphia . . . . .	$\frac{1}{2}$ grain.
Carbonate of Potassa . . . . .	1 drachm.
Syrup of Tolu . . . . .	5 ounces.

Mix. A tablespoonful to be taken three or four times a day.

## NARCOTICS

Are medicines which diminish sensibility, abate pain, and induce stupor or sleep. Opium is the chief medicine of this class. When opium is prescribed, the exact dose ordered should be given, otherwise, instead of causing sleep, if the dose be diminished, a stimulant effect only will be obtained; or, if it be increased, a poisonous action may ensue. No medicines are so much modified in their action by custom as Narcotics; thus, when they have

been long and frequently taken, they lose their influence in disease; and if this effect be not mentioned to the prescriber, it is not likely that the Narcotic will be productive of benefit. The inefficiency of one Narcotic, arising from custom, does not extend to another. Any singular influence of a Narcotic upon the system of the invalid should be mentioned to the medical attendant. (See Laudanum and Opium.) Many mental impressions are narcotic; *Sound* is one peculiarly so—the repetition of the same sound. When sound is varied, the attention is arrested, and the opposite result occurs. It is the monotony of the sound therefore—such as the ripple of small waterfalls, the voice of a dull reader, the moaning of the breeze—that is followed by soporific effects. The stillness of evening is highly favourable to the employment of music as a Narcotic agent:—

“Let the sounds of music  
Creep in our ears; soft stillness, and the night,  
Become the touches of sweet harmony.”

And when sleep is thus induced there is much less likelihood of its being disturbed. Patting an infant on the back, whilst at the same time the nurse hums a monotonous tune, is almost sure to induce sleep. Many such instances of the beneficial effects of mental Narcotics might be adduced, but enough has been said to show the importance of not disregarding them.

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## STIMULANTS

Are usually prescribed in low conditions of the system, when a sudden and powerful impression is required to be made upon the brain and nervous system. They are, however, too apt to be resorted to on every occasion of flatulence or pain in the bowels; and they are also not unfrequently employed where strength is required to be given, but where excitement would prove injurious. But it should be understood that action is not strength. There is, indeed, no class of medicines which requires more decidedly the authority of the physician for their administration than Stimulants.

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## TONICS.

Medicines which restore or strengthen the impaired powers of the muscular fibre, giving what is called tone or strength to the

system, are called Tonics. Quinine, Calumba, Chirayita, Gentian, bitter and astringent vegetable substances, Tincture of Iron, and a few of the acids, come under the denomination of Tonic remedies. The following pills may be taken twice a day for weakness of the stomach, general debility, and all complaints requiring Tonics. Take of—

Sulphate of Quinine . . . . .	1 scruple.
Extract of Camomile . . . . .	1 drachm.

Make twenty pills. When their use is long persisted in, an aperient pill should be combined with them.

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### ADMINISTRATION OF MEDICINES.

Fluid Medicines are generally ordered in drops, or in teaspoonfuls, or in tablespoonfuls; but as these are all indefinite quantities—the magnitude of the drop depending on the nature of the lip of the phial from which it falls, and the capacity of the spoons varying according to their form—glass measures should be employed, especially when the medicine is of an active kind. A large drop is equivalent to a *minim*; a teaspoonful to a *fluid drachm*, or sixty minims; and a tablespoonful to *four drachms*, or half an ounce. When medicines are volatile, they ought to be swallowed the instant they are poured into the glass, and the bottle should be immediately corked. When they are to be given in a state of effervescence, the dose of the medicine should be poured upon that of the lemon juice, previously put into a tumbler; by this means the union between the acid and alkali is more immediate, and the briskness, depending on the state of the carbonic acid gas which is extricated, proceeds without losing a portion of the dose, which is apt to take place when a wineglass is employed. It frequently happens that children cannot be persuaded to take medicines; and instances have occurred in which the little invalids have fallen victims to the disease, from a reluctance on the part of the nurse to employ force in administering the medicine; in such cases, the medical spoon answers extremely well.

When medicines are presented in the solid form, many persons have much difficulty in swallowing pills, and the smaller the pills the greater is their difficulty. This arises from the nature of the first acts of deglutition, which depend partly on the will, and partly on the action of several involuntary muscles. In the first part of the process the morsel requires to be pressed between the tongue and the palate, in order to be carried backwards beyond

what is termed the anterior palatine arch. This is purely an act of volition; but, if the morsel to be swallowed is small, when it is raised to the palate the sensation produced by a large morsel is not experienced, consequently, the voluntary act is imperfect, and the mind being impressed with the difficulty of performing it, the morsel is retained in the mouth, instead of being carried back and dropped into the gullet, as it should be by the second part of the process. In the usual mode of swallowing a pill, by laying it upon the tongue and taking a mouthful of water, the act of deglutition is excited by the water, which passes down merely as a solid body, and carries the pill with it; but, when the mouth is not closed, so as to form the water as it were into a mass, the fluid passes and leaves the pill behind it. To remedy this defect in deglutition, the pill should be either put into a morsel of soft bread, or into a mass of any conserve, in which, becoming a portion of the mass which envelopes it, the difficulty of deglutition ceases.

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# DRUGS, CHEMICALS,

ETC.

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## ACID, ACETIC, CONCENTRATED.

THIS acid, applied by means of blotting-paper, or fine cambric, speedily produces vesication, and is sometimes used as a substitute for a blister in cases of sudden inflammation, such as croup, &c., which do not admit of delay. It is also applied with a camel's-hair pencil to destroy warts and corns, and in the cure of ring-worm; but great care should be taken in its application, that it does not extend beyond the part affected. It is likewise, from its pungent odour, a useful stimulant held to the nostrils in faintness, and it has been supposed to have some influence in preventing infection. A piece of blotting-paper or cambric, moistened with acetic acid and applied to the skin, soon excites heat and redness; and if suffered to remain, the cuticle peels off. This forms a good substitute for a blister in inflammatory sore throat, where external irritation, rapidly excited, is often very effectual.

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## ACID, CITRIC.

(Crystallised Lemon Juice.)

The solution of this acid in water, in the proportion of nine drachms and a half of the crystals, one or two drops of oil of lemon, and one pint of water, will answer nearly all the purposes of recent lemon juice, and is even preferable for forming the common effervescing draught with carbonate of potassa. One scruple of this acid triturated with a little sugar and a few drops of the essence of lemon, and dissolved in a pint of water, forms a

grateful refrigerant beverage, resembling lemonade, and is useful in febrile and inflammatory complaints, allaying heat and irritation, and reducing the pulse.

The drink known under the name of "King's Cup," is also a good diluent, and often used at the table and in the sick room. It is made by pouring a quart of cold spring water upon the rind of one or two lemons, *peeled very thin*, and leaving it to infuse for six or eight hours. It is then strained, and should be bright and pale yellow.

Fifteen grains of the lemon acid in solution will saturate one scruple of carbonate of potash, and form an excellent substitute for soda water.

#### SALINE MIXTURE.

Take of	R
Citric acid	Acidi citrici,
Bi-Carbonate of Potash,	Potassæ bicarbon. aa ʒj.
Of each one drachm.	
Lemon syrup, two ounces.	Syr. limonis, fʒij.
Distilled water, twelve ounces.	Aq. destillat. ʒxij.
Mix.	

Two table-spoonfuls of this mixture may be taken every four hours in fevers and inflammatory sore throats.

#### ACID, MURIATIC.

This acid has been given as a refrigerant and antiseptic in scarlatina and fevers of the typhoid type, in doses of ten or fifteen minims in a sufficient quantity of barley-water or gruel every three or four hours. It is also used, largely diluted, as a gargle for ulcerated throats in scarlet fever, in the following forms :—

#### MURIATIC ACID GARGLE.

Take of	R
Infusion of roses, four ounces.	Infus. rosar, ʒiv.
Muriatic acid, from twenty to forty minims.	Acidi hydrochlorici, ℥xx. ad xl.
Honey of roses, one ounce.	Mel. rosar, ʒj.

Mix, and gargle the throat frequently.

## MURIATIC ACID LINCTUS.

Take of	<b>R</b>
Honey of Roses, ten drachms.	Mel. Rosar, ʒx.
Syrup of red poppies, two drachms.	Syrup. rhæados, ʒij.
Muriatic acid, ten minims.	Acid. hydrochlor. ℥x.

Mix, and apply a little of it to the mouth and throat, with a camel-hair pencil, in ulcerated sore throat, and sore mouth.

## MURIATIC ACID OINTMENT, FOR SCALD HEAD AND RINGWORM.

Take of	<b>R</b>
Green elder ointment, ten drachms.	Ungt. sambuci, ʒx.
Muriatic acid, half an ounce.	Acid. hydrochlor. ʒss. ft. ung.

Mix well together, and apply a piece the size of a walnut night and morning.

As a tonic, muriatic acid may be given in a dose of from ten to twenty minims in two ounces of water, or any vegetable infusion. This acid is also employed for the destruction of warts, which may be touched with it night and morning; taking the same precaution in its use as is recommended under the head of acetic acid. It is frequently used as a fumigation for purifying infected apartments and linen which has been worn by persons affected by contagious diseases. According to Dr. Paris, this acid, when mixed with a strong infusion of quassia, is a most effectual remedy in preventing the generation of worms; indeed, all bitter vegetable infusions are useful in these cases.

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ACID, NITRIC.

This acid is seldom employed except for pharmaceutical purposes; in its concentrated state, it is a potent caustic, and would probably be a useful application in the bite of a mad dog, in situations where the knife cannot be employed. Nitric acid vapour is also used in fumigations for the destruction of contagious and infectious effluvia. It destroys warts in the same manner as the acetic and muriatic acids. In India, during the epidemic cholera, nitric acid was employed for the purpose of vesication; and being found exceedingly successful in that disease, by the quickness of its action (the effect being attained in two minutes), it was subsequently extended to a variety of other diseases, where prompt counter-irritation was required. The following is the manner in which it was used:—Two parts of the acid were mixed



with one of water, and spread over the part with a feather; or the surface was rubbed with the mixture till sharp pain was induced, and the acid was then neutralised by a solution of salt of tartar.

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### ACID, NITRIC, DILUTED.

Is tonic, antiseptic, and antisymphilitic. The dose of diluted nitric acid is from ten to thirty minims taken in three ounces of water, three or four times a day. If this acid be further diluted, so as to equal the acidity of lemonade, and sweetened with sugar or capillaire, it will be found an excellent and agreeable beverage: it has been given repeatedly with advantage in typhoid, malignant, and petechial fevers. A lotion, made with two drachms of this acid to a pint of water, has been found serviceable when applied to ulcers of an unhealthy and fœtid character. Diluted nitric acid has been given with benefit in dyspepsia, particularly when arising from sympathy with a diseased liver, or some other of the abdominal viscera; but, to attain its full effect, it should be long and steadily continued.

#### NITRIC ACID MIXTURE.

Take of	R
Diluted nitric acid, one drachm.	Acidi nitrici diluti ℥j.
Distilled water, thirteen ounces.	Aq. destillat. ℥xiiij.
Simple syrup, one ounce.	Syr. simp. ℥j.

Mix.—Four table-spoonfuls of this mixture may be taken for a dose in typhoid, malignant, and petechial fevers.

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### ACID, NITRO-MURIATIC.

This acid, when properly diluted, exerts a tonic and stimulant influence. It is, however, chiefly used in the form of a foot-bath in hepatic affections, and in deficient secretion of bile. It is given internally in doses of from ten to fifteen drops, well diluted with water, two or three times a day.

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### ACID, PYROLIGNEOUS.

This acid is applicable to all the purposes for which vinegar is employed, and, by dilution with water, will form vinegar of any

strength. One part of this acid and eleven parts of pure water, form the distilled vinegar used by chemists, surgeons, and apothecaries, and is suitable to all medical purposes. One part of this acid and six parts and a half of water, will form the strongest pickling vinegar (called No. 24); and is applicable to pickling and preserving meat, fish, game, and every other purpose for which strong vinegar is required. One part of the acid and nine parts of water are equal to the best pickling vinegar (called No. 22); and are proper for pickling most kinds of vegetables, for salads, table, or culinary and family uses. When undiluted, this acid is suited for exportation and fumigation, and is a powerful antiseptic application. In diluting the acid with water, it is only necessary to stir them well together. For medicinal purposes distilled water is preferable; for other uses, cold soft water is the best. This acid is not injured by weather or climate; it will preserve animal matter, cooked or raw, for weeks in the hottest weather; and by applying it to meat, fish, or game, it will completely remove must, taint, and incipient putrefaction. It is used in the same manner as brine for immersing raw or cooked meats, without the necessity of adding salt or spice. It is also frequently employed in place of common vinegar for inhaling, in recent sore throats, hoarseness, &c. The following is the usual way of applying it:—One part of the acid is put into a teapot, or an inhaler, and six parts of boiling water are poured upon it; the spout of the vessel should then be introduced into the mouth, and the acid vapour inhaled.

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### ACID, SULPHURIC.

(OIL OF VITRIOL.)

This acid is prescribed chiefly in the form of elixir of vitriol, which is the acid in a state of dilution, with an aromatic added.—(*See Elixir Vitriol.*) Mixed with nitre, it is used for fumigating chambers.—(*See Nitrous Fumigations.*) Externally, it has been used with advantage for the itch, in the proportion of half a drachm to an ounce of lard. This ointment is also useful in cases of ringworm.

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### ACID, TARTARIC.

Used as a substitute for citric acid, in the formation of refrigerant drinks in febrile diseases; and as it does not deliquesce by

exposure to air, it is generally employed in the preparations of effervescing powders.

## L E M O N A D E.

Take of	R
Carbonate of soda, two scruples.	Sodæ sesquicarb. ℥ij.
Powdered sugar, one drachm.	Sacch. alb. ℥j.
Essence of lemon, four drops.	Ess. limonis, gtt. iv.
Tartaric acid, thirty-five grains.	Acidi tartaric. gr. xxxv.

Rub the essence and tincture of lemon-peel with the sugar, then add the carbonate of soda, dissolve the whole in half a pint of spring water, and lastly add the tartaric acid.

## ÆTHER

Has been long and well known for its powers as a universal stimulant\* and antispasmodic. It may be given safely in any painful complaint unattended with inflammation.†

Æther, spirits of lavender, of each a teaspoonful, mixed with a wine-glassful of cold water, and taken immediately, is a good remedy in the hysterical and hypochondriacal lowness, to which many persons, especially delicate females, and sedentary men of weakly constitutions, are subject. A teaspoonful of æther, in half a wine-glassful of brandy, and twenty-five or thirty drops of laudanum, will often relieve the excruciating torments of the gout when it has fixed in the stomach; it is at the same time advisable to wrap the feet in flannel, which will conjoin in inviting back the gout to them, which appear to be its natural seat. Equal parts of spirits of wine and camphor, æther, and laudanum, mixed in a phial, form an admirable application for the gout or cramp at the stomach, if well rubbed on the part, to which a piece of warm flannel should afterwards be applied. The same application is also useful in that kind of rheumatism, without fever, which is called chronic, and often attacks people advanced in life, although others are by no means exempt from it; it is to be rubbed frequently on the pained part, and a warm flannel applied as recommended above. A teaspoonful of æther taken in a glass of cold water, on the approach of an asthmatic fit, will frequently prevent, and always moderate it. The same dose,

\* Stimulants.—Medicines which excite the circulation of the blood.  
Antispasmodic.—Medicines which cure spasm.

† Inflammation may generally be known by the pain being attended with much fever.

taken in the same manner, sometimes relieves headaches, particularly those of the nervous kind; but is, perhaps, as often efficacious when applied to the part where the pain is, by means of the hand, into which a little æther is to be poured. A few drops of æther allowed to fall into the ear, when the head is inclined to one side, the part being previously fomented as recommended under the article Laudanum, and being immediately filled with cotton after the introduction of the æther, will mostly allay the violent pain which this part sometimes suffers. By the way, it may not be altogether out of place to observe, that this method of fomenting or steaming the ear is commonly effectual in discharging insects, that accidentally get lodged in it. A teaspoonful of æther, in a glass of sherry, is a capital remedy in relieving sea-sickness.—Æther should be kept in a dark place, for when exposed to light in a bottle partially filled, it absorbs oxygen and becomes vinegar. Nothing is said here of its inhalation to relieve pain, as it should not be used thus without the advice of a physician.

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## SULPHURIC ÆTHER.

### CASES IN WHICH THE USE OF ÆTHER IS NOT ADMISSIBLE.

*First*, those of full habit; *second*, those predisposed to apoplexy; and *thirdly*, where there is much constipation of bowels. In case of poisoning by this drug, the first thing to be done is to empty the stomach of its contents, by the stomach pump, or emetics (*see White Vitriol*), then stimulants are to be employed; the most effectual are, the injection of cold water into the ears; cold affusion to the head and neck; warmth to the legs and feet, and the internal use of Sal Volatile. The same means are to be resorted to in alarming cases of drunkenness from spirits.—In administering æther, it should be recollected, that *one* part of it requires *ten* parts of water for its solution; and if this quantity be not used, the unmixed æther, floating on the surface of the water, excites coughing and irritation in the throat in the attempt to swallow it.

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## ADHESIVE PLASTER

Is employed for dressing wounds and sores; all that is commonly required for effecting a cure is, by pressure and other means, to bring the parts into accurate contact, and to keep them so by straps of Adhesive Plaster.

## ALOES, BARBADOES.

Used in veterinary practice.

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## ALOES, SOCOTRINE,

Is a warm and somewhat stimulating cathartic, acting slowly, and exerting its effects chiefly upon the large intestines. In small doses of two or three grains it usually acts as a gentle laxative; discharging, at a single operation, the fecal contents of the lower bowels with little uneasiness. In females, it acts also upon the uterine system; not unfrequently producing pain in the loins, and either increasing the menstrual discharge if present, or restoring it if suppressed. Aloes has also the property of exciting the stomach, thereby increasing the appetite and invigorating digestion, when these are impaired in consequence of deficient tone of that organ. It is frequently and most usefully prescribed to relieve habitual constipation, dependent upon torpor or deficient irritability of the bowels. With this view it is given in small doses of from one to five grains, repeated daily, or as often as circumstances may call for its use. It should, as a general rule, be taken at bed-time, as the slowness of its operations will usually preclude any disturbance of rest during the night. In this way it often proves highly advantageous in chronic rheumatism, green sickness, and various nervous affections, relieving the inconveniences arising from the constipated state of the bowels, without producing either local or general debility. When taken in the quantity of one or two grains a short time before dinner, it promotes the appetite, renders the food less oppressive to the stomach, and obviates the flatulence so frequently a troublesome attendant upon dyspeptic complaints: in fact, aloes is the basis of almost all those combinations which have enjoyed so much popular credit under the names of *Antibilious* and *Dinner Pills*.

The emmenagogue virtues of aloes have been long and generally known; it forms, therefore, an ingredient in most of the compounds employed in cases of obstructed menses. The cases to which it is best adapted, are those in which deficient energy of the uterus is accompanied with constipation of the bowels, and more or less general debility. In these it may be combined with myrrh and the carbonate of iron. Advantage may sometimes result from full purgative doses of aloes about the period at which the menstrual

efforts should occur; but it ought not to be given where the suppression depends upon the inflammatory excitement of the uterus or a plethoric condition of the system, nor in such cases as are complicated with hæmorrhoidal discharges. Wherever tendency to hæmorrhoidal disorder exists, aloetic preparations will invariably prove injurious. Aloes is also contra-indicated in pregnancy during its advanced stages, or at any stage when there is a likelihood of miscarriage.

#### THE ALOETIC PILLS.

Take of	R
Extract of aloes, twenty grains.	Ext. aloes, gr. xx.
Powdered myrrh, thirty grains.	Pulv. myrrhæ gr. xxx.
Extract of gentian, twenty grains.	Ext. gentianæ gr. xx.
Sulphate of iron, ten grains.	Ferri sulph. gr. x.
Mix, and divide into eighty pills.	Simul contunde, et in pilulas 80 divide.

Two or four of these pills may be taken in leucophlegmatic and strumous habits, when the alvine excretion is irregular.

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#### ALUM

Is a medicine of considerable use in several cases, more particularly as an external application. Half a drachm dissolved in half a pint of water is a good application in slight inflammations of external parts of the body: rags wetted in the lotion should be kept constantly on the part, and renewed as they become warm; recent boils have by this means been dispersed, and, consequently, much pain and trouble has been saved to the patient. Some people are often subject to a soreness of the tongue and mouth, especially during the summer season, which may be readily removed by rinsing the mouth frequently with a solution of alum in the proportions already mentioned. If it should make the mouth bleed, or smart much, it will require a little dilution. The soreness of the nipples, which often happens to women after delivery, so as to prevent the parent from nursing her child, is readily removed by frequent ablution of the parts with the solution of alum. If it create much smarting, in the proportions mentioned, it will be proper to dilute it. The nipples should be well washed before the child is suffered to suck, otherwise the austere taste of the alum will make it loathe the breast.—A scruple of alum dissolved in a teacupful of water, makes a moderately strong solution, which, if a little is sniffed up the nose repeatedly,



will often succeed in preventing bleeding from that part.—Alum is an approved remedy for bleedings in the internal parts; but these, when trifling, require no such aid; and, when excessive, require such discrimination as necessarily calls for the judgment of the profession.—One drachm of alum dissolved in four ounces of vinegar, to which water and spirit of wine, of each two ounces, is added, makes an excellent lotion for chilblains; cloths wetted in it should be kept constantly on the parts.

In cases of flooding after delivery, or miscarriage, alum is a good remedy. The following is a good astringent mixture:—Take of alum half a drachm, diluted sulphuric acid (oil of vitriol), one drachm, water, six ounces. Mix;—the sixth part every three hours. Half an ounce of alum and the same quantity of white vitriol, in two pints of water, form an excellent injection in the whites, to which women are subject. In lead colic, from which painters suffer, alum has been found to be more efficacious than any other remedy. Alum whey is made by boiling two drachms of powdered alum in a pint of milk, and then straining; the dose is a wineglassful. A small piece of alum, briskly agitated with the white of an egg, forms a coagulum, which, applied between two pieces of gauze, or thin rag, has been found serviceable in some species of ophthalmia. Alum has the property of clearing turbid water, wine, and spirituous liquors, for which purpose it is extensively employed. It is also used by skin-dressers and tallow-chandlers, to render the tallow more firm; by paper-makers, to prevent the ink from sinking into paper intended for writing; and by manufacturers of Prussian blue: but the principal consumption of it is in the various processes of dyeing. As an emetic in croup it is one of the safest and most efficacious of this class of remedies. It is given in teaspoonful doses, mixed with syrup, and repeated if necessary. It is also very useful in whooping-cough; two grains may be given to a child of two years, three times a day, mixed with syrup. The dose to be increased in proportion to the age.

#### ALUM GARGLE, FOR RELAXED UVULA AND TONSILS.

Take of  
Bruised oak bark, one ounce.  
Water, one pint and a half.  
Boil down to one pint, strain, and  
add—  
Powdered alum, half a drachm.  
Spirit of wine, or brandy, two  
ounces.  
Mix.

R  
Quercus cort. contusi. ʒj.  
Aque puræ Oiss.  
Decoque ad octarium unum, et liquori  
colato adjice—  
Aluminis, pulv. ʒss.  
Sp. vin. gallici ʒij., fiat gargarisma.

## AMMONIA.

Ammonia is employed in medicine as a powerful stimulant and antacid. It may be given in doses of from five to ten grains of the carbonate, in two tablespoonfuls of camphor mixture. This is an effective nervous stimulant in certain paralytic affections, and in those cases of indistinct vision, and noise in the ears, to which nervous persons are subject, and which sometimes appear connected with debilitated digestive powers. Faintness and giddiness are also immediately relieved by a dose of Ammonia; from fifteen to thirty drops of Liquor of Ammonia in various degrees of dilution. In heartburn and acidity in the stomach, Carbonate of Ammonia is useful, not merely as a stimulant, but as neutralizing the irritating acid matter; in such cases it may more conveniently be given in infusion of calumba. As a nasal stimulant, *strong* Liquid Ammonia has long been used for the relief of headache, faintness, and vertigo. As an external stimulant, combinations of Ammonia with oily substances are usually to be preferred. (See Hartshorn.) Ammonia is sometimes spoken of as an antidote for certain poisons, and more especially where persons have been bitten by venomous snakes. Eau de Luce (the compound Tincture Ammonia), which is strong Liquid Ammonia, flavoured with the oils of amber and lavender, and rendered milky by mastic, is among the remedies most esteemed in many parts of India. In very mild cases so powerful a stimulant is no doubt of real efficacy. Even the sting of the scorpion and the bite of the viper are said to be thus successfully treated; but here, the symptoms are so various in different individuals, and so seldom fatal, that no specific virtue can be assigned to Ammonia upon such evidence.

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ANTIMONIAL POWDER.

The uncertainty of composition renders it so indefinite in its effects, that it is now properly falling into disuse. In all cases Antimonials should be used with extreme caution: in infants, especially, they sometimes produce very distressing and even fatal vomiting. No acid drink should be taken when Antimonials are prescribed.



### ANTIMONIAL WINE.

In doses of from fifteen to twenty or thirty drops in a table-spoonful of water or camphor mixture, repeated every two or three hours, Antimonial Wine is useful, after bathing the feet in hot water, to excite perspiration and allay fever in slight colds. The perspiration should be maintained by tepid, but not acidulated, mild fluids. A tea-spoonful, given every five minutes until vomiting occurs, is a safe means of emptying the stomach in an overloaded or deranged condition of that organ in infants. If it does not cause vomiting after the administration of the third or fourth tea-spoonful, its employment should be discontinued.

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### ARROW ROOT.

The powder of Arrow Root is a pure starch, which, although insoluble in cold water, yet forms a mucilage with boiling water. Arrow Root is made by rubbing the powder with a little cold water in a basin, by means of the back of a spoon, until it is completely mixed, then pouring boiling water over it, continuing to stir assiduously until a soft tenacious mucilage is formed, and lastly boiling it for five minutes. A table-spoonful of the Arrow Root Powder is sufficient to make a pint. It may be moderately sweetened and rendered more palatable by the addition of a little lemon juice; but cinnamon, or any astringent substance, precipitates the starch and destroys the smoothness of the mucilage; hence, if wine be ordered, Port should not be used.

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### ASSAFŒTIDA

Is chiefly employed as a stimulant and anti-spasmodic in hysteria and hypochondriasis, and various nervous diseases. Dose, from three to five grains, given in the form of a pill.

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### ASSES' MILK (ARTIFICIAL).

There are several ways of preparing this; but two will suffice.

1. Boil in three pints of water till half wasted, one ounce each of eryngo root, pearl barley, sago and rice; strain, and put a table-

spoonful of the mixture into a coffee-cup of boiling milk, so as to render it of the consistence of cream. Sweeten with sugar or honey to suit the taste.

2. Take two large spoonfuls of good hartshorn shavings, two ounces of pearl barley, one ounce of eryngo root, the same quantity of china root, and preserved ginger; boil the whole in three quarts of water till reduced to three pints. Then boil a pint of new milk, mix it with the rest, and put into it half an ounce of balsam of tolu. Dose, half a pint morning and night. The milk of the ass and the camel, and in northern countries that of the goat, is principally employed for medicinal purposes. When infants are nursed on cows' or asses' milk, it is of the greatest importance to give it directly from the animal, as the atmosphere speedily makes a great change on this delicate fluid. If this be not possible, it ought to be carefully covered and kept warm, by placing the vessel containing it over boiling water. This is generally done when asses' milk is given as a medicine, and is probably one great cause of the good effects arising from it. A pint of warm milk from the cow, with a little sugar or honey, and a table-spoonful of good rum, has frequently been found in many cases successful in chronic debility, when the milk of asses or women had failed.

### BALSAM, COPAIVA.

Stimulant, diuretic, and laxative. It seems to act more powerfully on the urinary passages than any of the other resinous fluids; hence its use in gleans, and in fluor albus. It has also been prescribed of late with peculiar advantage in these diseases, combined with the tinctures of cubebs and buchu leaves. It may be given in doses of from fifteen to forty drops twice or thrice a day, either upon water or rubbed into an emulsion by the aid of yolk of egg, or gum arabic, as in the following forms:—

Take of	R
Mucilage of gum arabic, one drachm and a half.	Mucil. acaciæ ʒiss.
Balsam of copaiva, half a drachm, To be well rubbed together in a mortar; then add, by de- grees,	Balsam. copaivæ, ʒss.  Tere bene, et adde
Peppermint or cinnamon water, one ounce.	Aq. menth. pip. sive aq. cinnam. ʒj.
Tincture of capsicum, five minims. Mix.	Tinct. capsici ℥v. Misce.

### BLACK DROP.

It is well known that in many constitutions the effects of common opium or laudanum are extremely distressing, and that in all habits it produces some inconvenience, often creating restlessness and delirium instead of producing sleep, and its use being generally succeeded by headaches, sickness, and debility. Of these deleterious properties the "black drop" is, by a chemical process, wholly deprived, whilst it retains, in the fullest degree, all the desirable powers of opium.

This preparation is applicable to all the cases in which opium or laudanum is employed; it is highly concentrated, one drop being nearly equal to four of common laudanum.

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### BARK (PERUVIAN).

Has fallen into general disuse since the discovery of Sulphate of Quinine—which see.

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### BATTLE'S SOLUTION OF OPIUM

Is a preparation of great celebrity, having all the effects of laudanum, without producing nervous symptoms or constipation. Dose, twenty drops, in a little water or camphor julep.

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### BLUE PILL

Exerts a decided influence over the liver, by increasing the flow of bile. It is deservedly esteemed, and may be usefully combined with rhubarb, colocynth, and other laxatives, in cases where the bowels are torpid. It is mild, and may occasionally be given to children when intended as a purgative. In affections of the liver, such as torpidity or want of proper action in that organ, three or five grains of Blue Pill may be taken with much advantage once or twice a week at bed-time, followed by a Sedilitz Draught in the morning.

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### BLISTERS

Are employed in the practice of medicine principally with the

intention of relieving the diseased condition of some internal organ, by producing a new irritation, or determination to the surface of the body, or, as it is usually termed, by counter-irritation. Independently of this effect, Blisters act also as general stimulants to the system, and as such are frequently employed with much benefit in spasmodic affections arising from debility. This stimulant effect of Blisters should be borne in mind, and consequently their application should be avoided in the very acute stages of inflammatory diseases, until the general excitement is subdued by antiphlogistic means. The method of applying the Blister Plaster, and dressing the Blister which it forms, is extremely simple; but, nevertheless, many persons are entirely ignorant respecting it. A Blister should never be applied to any part of the skin which is excoriated or otherwise broken. The part to be blistered should be well cleaned with a little soap and water, and rubbed with a rough towel; and the Blister should have a margin of adhesive plaster to retain it in its place. In ordinary cases, the Blister Plaster is usually left on until the blister rises; but if the person be of an irritable habit, it may be taken off five or six hours after its application; it is also desirable to guard against strangury, and the irritant effects of absorption, by interposing a piece of gauze, or silver paper moistened with oil, between the skin and the Blistering Plaster: this is preferable to drinking largely of mucilaginous and other fluids, which often defeats the beneficial effects anticipated from a Blister. In general the excitement caused by the first action of a Blister Plaster disposes to sleep, and, unless an immediate effect be desired, or unless directions are given to apply a Blister at some particular time, they are usually applied at bed-time. Many persons have a dread of large Blisters, but when the full effect of Blistering is required, a large Blister is to be preferred to a small one, for the irritation from the former is not greater than from the latter, and the benefit more decided. Large Blisters, however, depress more than small ones, consequently, where simple counter-irritation is required in weak habits, small Blisters are to be preferred. When a Blister has been raised, the vesicle should be cut with a pair of sharp seissors, at the most depending part, and the fluid evacuated. If the intention be to heal the blistered surface, the cuticle should *not* be removed, *but be made smooth*, and a piece of soft lint, spread with spermaceti ointment, applied over it. "Where (says Dr. Paris,) the local inflammation runs higher than we desire, no application will prove more soothing than a common bread-and-water poultice; and in those cases in which the blistered surface refuses to heal kindly, spermaceti ointment, mixed

with finely levigated chalk, will often astonish by the rapidity of its healing influence." If the object be to form a perpetual Blister, *the cuticle should be removed*, either by cutting it round the edge with a pair of seissors, or by applying a hot poultice, which carries the cuticle away with it when it is taken off. In dressing the denuded part, in order to make the perpetual Blister, the lint upon which the irritating ointment (Savine) is spread, should be cut smaller than the blistered surface, and always afterwards kept to the same size. For the manner of dressing a perpetual Blister, see Savine Ointment. When medicines are to be applied to a blistered surface, the cuticle should be removed entirely.

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## BLUE STONE

(SULPHATE OF COPPER)

Is usually employed in destroying proud flesh, for which purpose it may be either wetted and rubbed on the part, or a little may be seraped down and applied, covering the sore with lint. Sometimes it is given internally, when a very active emetic is required, in cases of vegetable narcotic poisons; the dose should then be from two to ten grains. It should never be used, however, without medical advice.

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## BORAX

Is much used as a gargle, in cases of tender mouth, ulcerated gums, and sore throat; it is a good detergent, applicable in the thrush of children, and for this purpose it should be mixed with an equal portion of honey. Adults may allow a small piece gradually to dissolve in the mouth. Borax Gargle is made by mixing together—

Borax . . . . .	2 drachms.
Rose Water . . . . .	8 ounces.
Honey of Roses . . . . .	1 ounce.

It is an elegant astringent gargle.

Half an ounce of borax dissolved in four ounces of boiling water, and sweetened with a little sugar, is an efficacious mixture for abating the febrile and restless state of children occurring during teething. The dose may be two tea-spoonfuls every third hour.

## BUCHU LEAVES

Are considered as diuretic and tonic, and are esteemed as a valuable remedy in rheumatism, irritable bladder, gravel, stricture, &c. They are given in infusion and tincture, half an ounce of the leaves being infused for three or four hours in half a pint of boiling water. A wineglassful for a dose, twice or thrice a day; or from one drachm to half an ounce of the tincture taken as frequently.

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## CALOMEL.

Calomel is justly considered one of the most efficient and valuable preparations of mercury, but requires to be used with much caution and judgment. Some constitutions are too readily and powerfully affected by it, and there are peculiar idiosyncrasies that forbid its employment altogether; in some instances a few doses will produce nervous irritation, or profuse salivation and other unpleasant effects. Nevertheless, in skilful hands, it is adapted to cure or relieve some of the most formidable diseases. In febrile affections it is often productive of great benefit; and, preceded by blood-letting, it is singularly efficacious in subduing inflammatory action in general. In typhus, combined with antimonials, it often effects a surprising amelioration of the symptoms. Its action varies considerably, according to the dose and mode of combination with other remedies. It increases the laxative qualities of other purgatives, as scammony, jalap, and rhubarb; with antimony and opium it opens the pores of the skin and induces perspiration; and with squills, digitalis, &c., it adds considerably to their diuretic effects. As a purgative it may be given in any case unattended with intestinal inflammation. It acts powerfully on the biliary secretion,—hence, in those complaints usually denominated *bilious*, it is a valuable medicine. In such complaints, and in disordered states of the stomach and bowels generally, three or four grains with ten grains of rhubarb or jalap may be taken at night, and should be followed early the next morning by the common *black dose*. Two or three such doses are commonly sufficient to relieve the bowels of much offensive matter. Calomel is also used successfully in chronic inflammation and induration of the liver, in glandular obstructions, rheumatism, indolent tumours, and in certain cutaneous eruptions. In some of these disorders it must be continued



in small doses until soreness of the gums is produced, but the medical man is the only safe judge in these matters. We shall not enter here upon the *antisyphilitic* virtues of Calomel.

Calomel is a no less important remedy in the treatment of diseases of children; and they in general bear larger doses than adults. In disordered states of the stomach and bowels, from whatever cause, it is extremely efficacious. In cases of croup, when promptly administered, it has saved the lives of many infants. Combined with jalap or scammony, it is an excellent remedy for worms, especially the *thread-worm*. In convulsions, hydrocephalus, and other infantile diseases, it constitutes a most valuable medicine; but we cannot too strongly protest against its indiscriminate employment in every ailment to which children are subject.

The usual dose as a purgative is from three to six grains, used as before mentioned. Two grains may be given to a child under twelve months old, and beyond that age from three to five grains, taking care whenever there is griping and frequent green mucous stools to suspend its use. It should be given in syrup, moist sugar, gum, or magnesia, avoiding saline and acid substances during its employment. As an alterative, the dose is from one to two grains, taken occasionally.

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## CAMPHOR.

Camphor is a stimulant, narcotic, and a promoter of perspiration. The efficacy of this medicine has long been ascertained in many very formidable diseases; but of its influence over these it would be to no purpose to speak, as their management requires a degree of discernment of which every one is not supposed to be possessed: we shall, therefore, confine the remarks to less desperate cases. It is administered in fever of a low character, in combination with ipecacuanha and opium; one grain of the latter with five grains of camphor, made into a pill, will often promote sleep and free perspiration in this disease. The same form of pill is of the greatest service in quieting pain and irritability after delivery, and in chronic rheumatism. In violent sick headache, the same preparation will afford great relief. Half an ounce, dissolved in two ounces of spirits of wine, forms the spirit of camphor, a useful preparation in many respects. Two drachms of camphor, dissolved in an ounce and a half of olive oil, is an excellent liniment for sprains, bruises, stiff joints, and rheumatism. Camphor has long been reputed a preservative against infection, for which purpose

it is worn round the neck in a small bag. Camphor mixture, or julep, is made by allowing a piece of camphor to dissolve slowly in a bottle of water. The camphorated soap has lately been much used for seald-head, chapped hands, and chilblains. Monsieur Dupasquier states that camphor is employed with advantage as a fumigation. The patient is to be covered with a blanket, tied or pinned close round the neck; half an ounce or more of camphor is then thrown on an iron plate, placed over a small chafing-dish within the blanket: the effect is a more copious perspiration than would be produced by the heated air, owing to an absorption of camphor which takes place. If this be correct, it might prove an excellent addition to heated air in cases of malignant cholera.

CAMPHORATED SALVOLATILE.—Camphor, combined with salvolatile, is very efficacious in relieving depression of spirits, spasms, or palpitations. In its present combined form the inconvenience of two bottles is dispensed with, and the preparation occupies but little space; it will, therefore, be found particularly convenient and useful as an immediate remedy for faintness and nervous headaches in crowded and overheated assemblies. It may also be used with advantage as a stimulus to the nostrils in cases of fainting.

## CAPILLAIRE

(SIMPLE SYRUP)

Flavoured with orange flower water. It may be made as follows:—

Sugar . . . . .	2 pounds.
Distilled Water . . . . .	1 pound.
Orange Flower Water . . . . .	1 ounce.

Dissolved by heat. It is used in preference to sugar for sweetening drinks.

## COLOMBA

Is a very good simple bitter, and perhaps more agreeable to delicate stomachs than most other medicines of this class; especially in the form of weak infusion, conjoined, if necessary,



with aromatics, in dyspepsia, in diarrhœa, and in the after treatment of cholera morbus. It has also a considerable power in allaying the irritability of stomach accompanying pregnancy, and in stopping the severe diarrhœa and vomiting which sometimes attend dentition. The dose of the powdered root for adults is from fifteen grains to half a drachm, repeated three or four times a day.

## STOMACHIC BITTER DRAUGHT.

Take of	R
Infusion of colomba, eleven drachms.	Infusi colombæ ℥xj.
Muriated tincture of iron, fifteen minims.	Tinet. ferri muriat. ℥xv.
Tincture of colomba, one drachm.	Tinet. colombæ ℥j.
Mix.	Misce.

## CARRAGEEN, OR IRISH MOSS.

This moss has long been highly esteemed by the peasants on the western coast of Ireland as a dietetic remedy for various diseases, more especially for consumption, dysentery, serofula, and affections of the kidneys and bladder. Dissolved, by being boiled in water, it forms a thick mucilage, more pure and agreeable than that produced from any other vegetable; and the jelly made from it is found to agree better with the stomach than any of those prepared from animal substances. A decoction of the moss, made by boiling half an ounce in a pint and a half of water or milk until reduced to a pint, is recommended as food for children affected with serofulous and rickety diseases, for such as are delicate and weakly, and for infants brought up by hand, or after weaning. As an article of diet for invalids generally, it is superior to isinglass, sago, and tapioca, being highly nutritious, bland, and easy of digestion.

## DIRECTIONS FOR USING THE MOSS MEDICINALLY.

Steep a quarter of an ounce of the moss in cold water for a few minutes, then withdraw it (shaking the water out of each sprig), and boil it in a quart of new or unskimmed milk until it attains the consistence of warm jelly; strain, and sweeten it to suit the taste with white sugar or honey, or, if convenient, with candied eryngo root: should milk disagree with the stomach, the same proportion of water may be used instead. The decoction made with milk is recommended for breakfast for consumptive patients, and that with water will be found a most agreeable kind of

nourishment, taken at intervals during the day, the flavour being varied with lemon-juice, or peel, Seville orange-juice, cinnamon, bitter almonds, wine, or any other material most congenial to the palate.

The decoction in water is also taken for the relief of coughs, at any time in the course of the day when they are most troublesome; and it is for this purpose simply sweetened with honey or sugar, or the syrup of poppies, syrup of squills, or the honey of roses, as the case may indicate. It must, however, be admitted, that experience of the virtues of this moss in cough does not justify the expectation that it will supersede the Iceland moss, the bitter principles of which render it so valuable as a tonic as well as a demulcent.

In dysentery, either the decoction in milk or water may be administered with equal advantage; and in addition to the sweetening matter, if a tea-spoonful of the tincture of rhatany be mixed with each cupful of it, tone will thereby be given to the intestines, at the same time that nourishment will be conveyed to the system, and irritation prevented. A large teacupful of the decoction may be taken three or four times a day.

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### CASTOR OIL

Is a very effective, yet mild aperient, usually acting speedily, without irritation; it is peculiarly appropriate in pregnancy, or where increased action of the system is to be particularly avoided. One ounce of Castor Oil, shaken up with two table-spoonfuls of water gruel, make a smooth emulsion, and conceal its oleaginous taste. Half a drachm to a drachm, blended with a little sugar, is a common dose for an infant. The energy of Castor Oil as a purgative is much increased by the addition of a little rectified turpentine.

Rectified Turpentine . . . . .	2 drachms.
Castor Oil . . . . .	6 drachms.
Solution Potash . . . . .	20 drops.
Aromatic Water . . . . .	1 ounce.

This forms an emulsion of singular efficacy and perfect safety in cases of obstinate constipation, even though other powerful cathartics may have proved fruitless. Castor Oil often excites nausea, to prevent which various means of administering it have been proposed. It may be mixed with gruel as above, or with warm milk, or rubbed up with gum arabic and cinnamon water, or

floated upon half a glassful of cold water and a tea-spoonful of brandy floated on the oil, or, best of all, mixed with two or three table-spoonfuls of the froth of beer, ale, or porter, and the whole swallowed. In measuring Castor Oil, the spoon, or whatever instrument is used, should be previously dipped in water, to prevent the oil from adhering to it. The dose is from half an ounce to an ounce and a half. The following form for Castor Oil Biscuits is recommended by Dr. Bull:—"Take a quarter of a pound of flour, two ounces of moist sugar, a small quantity of mixed spice, finely pounded, and with an ounce and a half of Castor Oil. Make the whole into the consistency of pie-crust, to which may be added a few currants. After rolling out the paste, divide into ten cakes, and bake over a quick oven. Each cake will contain rather more than a tea-spoonful of oil, and one or more may be given according to the age of the child. The same may be made into gingerbread nuts, by adding proper proportions of treacle and ground ginger."

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### CHALK (PREPARED)

Is often given, especially to children, in cases of looseness and acidity. Five grains may be given to a child five years old, and repeated three times a day. In common diarrhœa, after the bowels have been evacuated by a rhubarb purge, one drachm of Prepared Chalk, dissolved in a wineglassful of cinnamon water, with ten or twelve drops of Salvolatile, will rarely fail in quieting them. Prepared Chalk is used as a dusting powder in moist excoriations, ulcers, burns and scalds, erysipelatous inflammation, &c., with general success.

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### CHARCOAL (LEVIGATED)

Is an antiseptic, and as such has been given internally to correct the putrid eructations of some kinds of dyspepsia. But in order that it may produce this effect, it should either be newly prepared, or such as has been preserved in very well-stopped bottles. The dose is from ten to sixty grains combined with rhubarb. Charcoal very finely levigated forms an excellent tooth-powder: it cleanses the mouth mechanically and chemically; but as alone it is dusty, and not easily miscible with water, it may for this purpose be mixed with an equal weight of prepared chalk, and, if requisite, scented with a drop or two of some essential oil.

## CHLORINE.

The most efficacious fumigation which has yet been proposed is Chlorine. It was first suggested as a disinfecting agent by Fourcroy, in 1791. The mode in which Chlorine disinfects the atmosphere is not understood, although it is conjectured that it decomposes the infectious matter, which is a compound, by attracting hydrogen. One objection exists to the employment of Chlorine—its being so powerful an irritant to the lining or mucous membrane of the air tubes in the lungs. Morveau endeavoured to surmount this difficulty by means of his permanent apparatus of disinfection, which consisted of a glass vessel encased in wood, having its mouth very accurately closed by means of a ground glass stopper, acted on by a vice. A slight turn of the vice allowed the vapours, by their expansive force, to raise the stopper and mingle with the atmosphere. By means of the vice the issues of gas are regulated at pleasure, whilst the lightness and closeness of the apparatus enable us to remove it readily from one place to another. However ingenious the plan of Morveau may be, and most ingenious it certainly is, this, and perhaps all disinfecting processes, (assuredly all for occupied apartments,) are superseded by the Solutions of Chloride of Lime and Soda, more recently introduced by Labarraque. Chemists do not seem fully agreed as to the precise nature of these compounds, but it is only material to know that they are most powerful disinfecting agents, and that since their introduction by Labarraque they have been applied to every kind of case in which the operation of such agents is requisite, by innumerable scientific persons of various nations, whose testimony is unanimous and loud in their favour. The Chloride of Lime is the preparation which Labarraque recommends for disinfecting apartments; while that of Soda is especially employed in topical and external application, to foul wounds, ulcers, &c. If an uninhabited place is to be disinfected, troughs or pans which expose a considerable surface to the air, and containing the Solution or Chloride of Lime, should be placed in various parts of the building; the same liquid should be poured over the floor, and sheets wet with it suspended in various situations. If an inhabited apartment is to be kept clear of impurity, the floor must be freely and frequently sprinkled with it, and portions of linen moistened with it should be attached to the bed-curtains, window-hangings, &c. The only inconvenience connected with the use of Chlorine is its tendency to excite coughing in those unaccustomed to breathe it; but the lungs being gradually used to the irritant

impression, the unpleasantness abates, and the patient should be informed that there is nothing unwholesome in the smell of the disinfecting liquid, whilst the putrid odour of a sick apartment is absolutely pernicious to life. The Solution of Chloride of Lime is made by mixing one part of Chloride of Lime with forty of water, in a flat dish or plate, so as to expose a large surface to the action of the air. Dr. Thomson says he has ascertained that the decomposition and consequent development of Chlorine is much quickened by placing a piece of coarse calico in the bottom of the vessel containing the Chloride.

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### CHAMOMILE FLOWERS.

The stomacheic virtues of Chamomile have long been established. The late Dr. Heberden found it, when combined with an aromatic, signally useful in relieving flatulency; and the extract of chamomile and ginger has been proved, by extensive use, to be the best combination for the purpose. Warm Chamomile Tea is usefully employed to assist the operation of an emetic, its tonic qualities rendering it preferable to warm water. Decoction of Chamomile Flowers is often used externally as a fomentation, but it is little preferable to warm water, excepting that the infused flowers serve to retain the heat of the application.

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### COCHINEAL.

In a recent number of the *Pharm. Journal*, Dr. Allnat says, "I have employed this remedy for the last twenty years in whooping cough, with the most satisfactory results. A peculiar acid is generated in the system by the disorder, which may be detected in the excretions from the stomach, and which, in my opinion, is the exciting cause of the spasmodic action of the glottis, producing the 'whoop.' It is obviously desirable, therefore, to neutralize the acrid condition of the first passages, in order to obtain the full advantage of the antispasmodic and anodyne properties of the Cochineal; and for this purpose the *alkaline solution* is invaluable. It is of a deep purple or violet hue, will keep a long time without change, and the active powers of the Cochineal are not impaired by the combination. The following is the form:—

Carbonate of Potassa . . . . .	1 drachm.
Cochineal . . . . .	1 scruple.
Boiling Water . . . . .	8 ounces.

The dose is a tea-spoonful three times a day."

## COLCHICUM.

The principal, indeed, now the only, diseases in which Colchicum is employed, are gout and rheumatism, for the former of which it has acquired the character of being a specific. Administered during a paroxysm of gout, it seldom fails to alleviate the pain and cut short the fit; but so far from preventing a return of the attack, most practitioners think that the employment of Colchicum renders the system more predisposed to the disease. In acute rheumatism Colchicum should never be given; but in gouty rheumatism it is often used in robust constitutions with benefit. As soon, however, as the bowels are affected, the action of the remedy must be closely watched, and the doses at first suspended or diminished. Dose, from two to five grains of the powder, to be given two or three times a day, and from twenty to sixty drops of the wine or vinegar, in half a wine-glassful of water, three or four times a day. It is seldom used in the form of powder; the Wine of Colchicum Seed is the best preparation, being of uniform strength.

## COLOCYNTH (BITTER APPLE).

On account of its extreme bitterness it is usually given in the form of extract, which is one of the most generally employed and safest cathartics in the whole Materia Medica. The Bitter Apple, mixed with an equal weight of camphor and black pepper, is successfully used for keeping moths from furs, woollen cloths, &c. Nevertheless, to be secure from these destructive insects, frequent airing is indispensable.

## CREAM OF TARTAR

Is an excellent cooling laxative, and its taste is less unpleasant than the generality of saline cathartics. A grateful and cooling drink, known by the name of "Imperial," may be prepared by mixing—

Cream of Tartar, . . . . .	$\frac{1}{2}$ ounce.
Fresh Lemon Peel, bruised . . . . .	4 ounces.
Loaf Sugar . . . . .	4 ounces.
Boiling Water . . . . .	3 pints.

This is an acidulous drink for invalids, and will be found an agreeable substitute for lemonade. Cream of Tartar Whey is prepared by boiling one draehm and a half of Cream of Tartar in one pint of new milk, and straining to remove the eurd. This, like the Imperial Drink, is an excellent diuretic and refrigerant in febrile diseases. Either of them may be taken *ad libitum*. A useful effervescing aperient, with Cream of Tartar, may thus be formed—

Cream of Tartar . . . . .	3 drachms.
Carbonate of Soda . . . . .	2½ drachms.
Water . . . . .	8 ounces.

For one dose.

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### CROTON OIL

Is an acrid cathartic, used chiefly in obstinate constipation. It should not be given in debility, or where there is any tendency to inflammation in the digestive organs, indeed, it ought never to be employed in the absence of the medical attendant. In cases of insensibility from apoplexy, two drops rubbed on the tongue, or five on the abdomen, will frequently produce fecal evacuation. It is often used externally by friction where long-continued vesication is desired. Care should be taken, however, to apply it only to the part intended to be acted upon.

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### DALBY'S CARMINATIVE.

This consists of—

Carbonate Magnesia . . . . .	2 scruples.
Oil of Peppermint . . . . .	1 drop.
Oil of Nutmegs . . . . .	2 drops.
Oil of Aniseed . . . . .	3 drops.
Tincture of Castor . . . . .	30 drops.
Tincture of Assafoetida . . . . .	15 drops.
Laudanum . . . . .	5 drops.
Spirit of Pennyroyal . . . . .	15 drops.
Peppermint Water . . . . .	2 ounces.
Comp. Tinct. of Cardamoms . . . . .	30 drops.

Mix.

“In examining the pretensions of this combination,” says Dr. Paris, “it must be allowed, that it is constructed upon correct



principles, and is a judicious compound." The dose is a small tea-spoonful in flatulency, griping, and irritation from teething, &c.

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### DANDELION

Is a useful tonic in chronic diseases of the liver, and in other affections accompanied with derangement of the biliary organs, as in some forms of dyspepsia and cutaneous disease. Many, too, consider it to be diuretic and aperient, but those effects are not produced unless it be given in very large doses. It is best employed in the form of decoction, prepared as follows—

Dandelion Herb and Root, fresh . . . . .	7 ounces.
Water . . . . .	2 pints.

Boil together down to a pint, and strain. Dose from two to four tablespoonfuls. Dandelion is thought well of by several foreign writers of eminence, and is by them generally recommended in the form of liquid extract, or, as it is sometimes termed, Mellago Taraxaci. A powder is sold under the name of Dandelion Coffee, which consists of Taraxacum Roots well cleaned, dried, and powdered, and mixed with coffee.

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### DEWEES' CARMINATIVE

Consists of—

Carbonate of Magnesia . . . . .	$\frac{1}{2}$ drachm.
Tincture of Assafoetida . . . . .	60 drops.
Tincture of Opium . . . . .	20 drops.
Sugar . . . . .	1 drachm.
Distilled Water . . . . .	9 fluid ounces.
Mix well.	

Dose, twenty-five drops to a child from two to four weeks old, increasing the dose for those more advanced. Useful in flatulent colic and diarrhœa.

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### DILL SEED

Is an aromatic stimulant. The Carminative Dill Water is its best preparation, and it has been very largely and successfully



used in the flatulent colic of children. It is a good vehicle for administering rhubarb and magnesia to children during teething, or when much flatus is present in the bowels. A tablespoonful may be given to a child a year old.

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### DISTILLED WATER.

This, the purest state of water, may be readily obtained by fixing a curved tin tube, three or four feet long, to the spout of a tea-kettle, and conducting its free end into a jar placed in a basin of cold water, and enveloped with a wet towel. The softer the water is, the better solvent it is of all animal and vegetable substances; hence, Distilled Water, being freed from every foreign ingredient, is necessarily the softest of all water. Distilled Water is mawkish to the taste, but this is easily corrected by pouring it from one jug to another, successively, for ten or fifteen minutes, so as to involve in it a quantity of atmospheric air.

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### DOVER'S POWDER.

A useful medicine for exciting perspiration in slight colds, after clearing the bowels, and putting the feet in warm water. It is an improper sudorific for young children, unless in peculiar cases, when it is ordered by a medical practitioner. It should be given at bed-time, in a *small* quantity of warm gruel, for it is apt to nauseate if copious drinking be resorted to immediately after its administration. In febrile and rheumatic affections, and in all cases where a sedative diaphoretic is required, its certainty of effect especially recommends it. The dose for an adult is from six to twelve grains; for a child between ten and fifteen years of age, from three to six grains.

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### ELIXIR OF VITRIOL.

This is an agreeable substitute for the dilute sulphuric acid. It is employed as a tonic in dyspepsia, and is particularly valuable in convalescence from serious complaints. The dose is from ten to twenty drops in a wine-glassful of water, three times a day. Elixir of Vitriol, in the proportion of one drachm and a half to half a pint of barley water, forms a good gargle.

## ENEMAS, CLYSTERS, OR LAVEMENTS.

This form of applying medicine furnishes a valuable resource in evacuating the bowels, when, from delicacy of stomach, medicines cannot be retained, or, from debility of body, they cannot be safely administered. The Purgative Enema is perhaps the most frequently employed. An efficacious one may be readily made by dissolving half an ounce of Epsom Salts, infusing half an ounce of Senna Leaves for an hour in a pint of boiling water; straining this infusion, and adding one ounce of olive oil; this seldom fails to produce the desired effect. By little alterations other and valuable ends may be attained. Thus, in swelling of the abdomen from flatulence, what may be called a carminative or anti-spasmodic effect may be procured by the addition of two drachms of tincture of assafœtida. In colic and inflammation of the bowels, a turpentine injection is often serviceable, and this may be formed by substituting the oil of turpentine for the olive oil, previously mixing it with the yolk of an egg.

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## EPSOM SALTS.

Although a common and excellent purgative, yet the mode of administering it is not at all understood. This Salt operates chiefly upon the first gut, the duodenum, where, stimulating the orifice of the common bile duct, it causes a great flow of bile into the bowels, which operates essentially in aiding the purgative influence of the Salt. On this account, in taking Epsom Salts, they should be dissolved in that quantity of water only which is necessary for their solution, and thus swallowed. An hour afterwards, a large basin of warm tea, or any warm diluent, should be drunk, which will aid the Salts in effectually clearing out the bowels. Epsom Salts may be taken in the commencement of any acute or inflammatory disease, and in young plethoric people, whenever the bowels require to be moved. The dose for an adult is half an ounce.

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## EXTRACT OF COLOCYNTH, COMPOUND.

This is a very useful purgative extract, and is much used in constipation of the bowels, in combination with calomel, blue pill,

or rhubarb, with a little oil of cloves or cinnamon, to prevent griping. Five grains each of blue pill and compound extract of colocynth, mixed and divided into two pills, and taken at bedtime, is an excellent purgative in bilious affections: and when torpidity of the liver exists, a Seidlitz powder should be taken the following morning to assist its operation. This extract is also much used, in doses of five grains, as a warm stomachic laxative, and is well suited for costiveness, so often attendant on people of a sedentary life; and, upon the whole, it is one of the most useful compounds in the Pharmacopœia.

Take of	R
Compound extract of colocynth, twenty-six grains.	Ext. colocynth, co. gr. xxvj.
Extract of jalap, two scruples.	Extracti jalapæ ℥ij.
Powdered rhubarb, one scruple.	Pulveris rhei ℥j.
Calomel, sixteen grains.	Hydr. chloridi mitis, gr. xvj.
Syrup of ginger, a sufficient quantity to form twenty-three pills.	Syr. zingib. q. s. ft. pilul. xxiiij.

Dose, one or two at bedtime, as a cathartic.

### EXTRACT (AQUEOUS) OF ALOES

Is employed for the same purpose as the aloes, and is said to be less stimulant and griping. Ten or fifteen grains, taken in the form of two or three pills, effectually empty the bowels.

### EXTRACT OF CHAMOMILE,

In doses of from five to ten grains, in the form of pill, twice or thrice a day, is an agreeable stomachic bitter.

### EXTRACT OF DANDELION.

Aperient and diuretic. Dose, thirty to sixty grains, five or six times a day, dissolved in some aromatic water. For its virtues, see *Dandelion*.

### EXTRACT OF GENTIAN.

Stomachic and tonic. Is an excellent bitter, chiefly used in

combination with sulphate of iron, &c., in the form of pill, in doses of from ten to twenty grains.

### EXTRACT OF HEMLOCK

Is a powerful narcotic, and very often serviceable as a substitute for, or in conjunction with, opium. It has also been found of use in chronic rheumatism, and especially in whooping-cough. The following pills are very effectual in allaying common cough: three or four of them may be taken at bedtime, to relieve the restlessness occasioned by rheumatic or local pains.

Take of  
Extract of hemlock,  
Dover's powder,  
Of each five grains.  
Mix, and divide into two pills, to  
be taken at bedtime.

R  
Ext. conii,  
Pulv. Doveri, aa gr. v.  
  
Misce, fiant pilulæ ij.

Dr. Paris states that a combination of hemlock with hyoseyamus, in the following mixture, affords a very effectual palliative for coughs and pulmonary irritation.

Take of  
Extract of hemlock,  
Extract of henbane,  
Of each five grains.  
Mucilage of gum arabic, two  
drachms;  
Rub these well together, then  
add,  
Mindererus's spirit,  
Distilled water,  
Of each half an ounce.  
Syrup of red poppies, one drachm.  
Mix, and make a draught, to be  
taken every four hours.

R  
Ext. conii,  
Ext. hyoscyami, aa gr. v.  
  
Mucil. gum. acaciæ ʒij.  
  
Tere bené; dein adde,  
  
Liq. ammon. acet.  
Aq. destillat. aa ʒss.  
  
Syr. rhæados ʒj.  
Misce, fiat haustus.

In chronic rheumatism much benefit has been derived from the administration of hemlock; and in chronic sciatica it has produced more beneficial effects than any other medicine. Hemlock is also employed externally to allay the pain of irritable ulcers and cancerous sores. The dose of the extract is from one to six grains, and it may be gradually carried to half a drachm. Hemlock, upon the whole, is a medicine of considerable power, and merits more attention than has hitherto been paid to it by British practitioners. Mr. Pettigrew states, that no remedy will relieve muscular spasms with such certainty as hemlock.

## EXTRACT OF HENBANE.

When given in sufficient doses, henbane operates as a decided narcotic, and in its general effects, much resembles opium; but it does not constipate, or affect the head; on the contrary, its tendency is rather to relax the bowels. Extract of henbane is given in doses of five grains, repeated three or four times a day. In large doses it acts as a violent poison. In cases accompanied with cramps, spasms, or convulsions, it may be combined with ipecacuanha, or James's powder; or, if much languor be present, with serpentaria. In habitual costiveness, it may be conjoined with cathartics, which it deprives partly of their irritating and griping quality, without otherwise affecting their operation.

Take of	<b>R</b>
Fennel water, four drachms.	Aq. fœniculi ℥iv.
Antimonial wine, one drachm.	Vini antimonii ℥j.
Extract of henbane, three grains.	Extr. hyoscyami gr. iij.
Syrup of marshmallows, one ounce and a half.	Syr. althææ ℥iss.
Mix.	Misce.

An infant from six to twelve months old may take a tea-spoonful every two hours, as a cough mixture.

Take of	
Compound extract of colocynth, two scruples.	Extr. colocynth, compos. ℥ij.
Extract of henbane, one scruple.	Extr. hyoscyami ℥j.
Mix, and divide into twelve pills.	Misce, et divide in pilulas xij.
Take of	<b>R</b>
Extract of henbane, ten grains.	Extr. hyoscyami gr. x.
Antimonial wine, two drachms.	Vini antimonii ℥j.
Mix.	Misce.

Dose. Ten drops three or four times a day to an infant with hooping-cough.

## ANTISPASMODIC PILLS.

Take of	<b>R</b>
Camphor,	Camphoræ,
Carbonate of ammonia, of each three grains.	Ammon. sesqui-carbon, āā grs. iij.
Ipecacuanha, one grain.	Pulv. ipecac. gr. j.
Extract of henbane, four grains.	Extr. hyoscyami gr. iv.
Mucilage, sufficient quantity to make three pills.	Mucil. q. s. fiant pilulæ tres.

One or two for a dose.

## EXTRACT OF HOPS.

This is a bitter and anodyne extract, and a slight tonic. The dose is from five grains to one scruple, in the form of pills, or dissolved in any aqueous vehicle.

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## EXTRACT OF JALAP,

Is similar in its effects, but not preferable to the powder, in doses of ten grains to one scruple. It is apt to gripe, unless triturated with soap, or made into an emulsion with almonds, gum arabic, or sugar.

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## EXTRACT OF LETTUCE.

The narcotic properties of lettuce were very early known. The extract is given in doses of from five to ten grains, either alone or united with an equal quantity of squill pill, and is frequently serviceable in relieving the chronic cough of old and consumptive persons.

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## ELATERIUM

Is one of the most powerful cathartics in the *Materia Medica*. Its efficacy in dropsies is considerable; it, however, requires very great caution in its exhibition. From the eighth to the half of a grain may be given at first, and repeated at proper intervals until it operates.

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## EXTRACT OF LOGWOOD

Is considered a good astringent in the treatment of diarrhœa. It should be given in solution, in the following manner :—

Take of  
 Extract of logwood, one scruple.  
 Chalk mixture, ten drachms.  
 Tincture of cardamoms, one drachm.  
 Mix, and make a draught.

R  
 Extr. hæmatoxyli ℥j.  
 Mist. cretæ ℥x.  
 Tinct. cardamomi ℥j.  
 Misce, et fiat haustus.

## EXTRACT OF OPIUM.

The dose is from half a grain to five grains, in the form of pills.  
(*See Opium.*)

## EXTRACT OF OX-GALL.

This very bitter extract is endowed with most decided tonic properties. It has been successfully used for increasing the activity of the digestive organs, and in all the cases in which the exhibition of tonic remedies is indicated. It is usually given in doses of from three to eight grains.

## STOMACHIC APERIENT PILLS.

Take of	<b>R</b>
Extract of ox-gall,	Fellis bovinæ inspiss.
Extract of gentian,	Ext. gentianæ,
Of each sixteen grains.	aa gr. xvj.
Scammony, eight grains.	Pul. scammon. gr. viij.
Mix, and divide into eight pills.	Misce, et divide in pilulas octo.

Dose—one or two at bedtime.

## GALLS.

Not much used internally, though they are said to be beneficial in the cure of agues. Externally they are applied with advantage, in the form of lotion and ointment, to piles.

Take of	<b>R</b>
Powdered galls, one drachm.	Pulv. gallæ ʒj.
Prepared lard, five drachms.	Adipis præpar. ʒv.
Mix, and make an ointment.	Misce, fiat unguentum.

To be applied morning and evening to the parts affected, in cases of *blind piles*; to this one drachm of opium, or camphor, may be added, if required.

A fomentation, made by macerating half an ounce of bruised galls in a quart of boiling water for an hour, has been found useful in prolapsus ani, the piles, and fluor albus, being applied cold. The camphorated ointment of galls has also been found very useful in this complaint, after the use of leeches; it is made by mixing half a drachm of camphor with one ounce of hog's-lard, and adding two drachms of galls in very fine powder.

## GAMBOGE

Is a drastic cathartic, producing, even in small doses, much irritation of the stomach and bowels. In consequence of the distress caused even by well-regulated doses of Gamboge, it is not a safe medicine for an unprofessional person to employ.

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## GARLIC

Is stimulant, diaphoretic, expectorant, diuretic, and anthelmintic, when exhibited internally; and rubefacient when externally applied. A clove of garlic, wrapped in cotton or gauze, or a few drops of the juice introduced into the ear, is extremely efficacious in nervous deafness. The dose of garlic in substance is from half a drachm to two drachms; or from one to six cloves, swallowed whole, twice or thrice a day; and in pills, united with soap or calomel, from fifteen grains to one scruple. Of the juice, half a drachm is given for a dose in any proper vehicle. The too liberal use of garlic is apt to occasion headache, flatulency, thirst, fever, inflammation, and discharges of blood from the hæmorrhoidal vessels: yet it may be considered a useful condiment for phlegmatic people, or those whose circulation is languid, and secretions interrupted; but with those subject to inflammatory complaints, or where great irritability prevails, this root in its acrid state may prove hurtful.

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## GELATINE.

For domestic purposes Patent Gelatine is frequently used as a substitute for isinglass. Gelatine may be obtained from bones, by employing bones which have been previously digested in hydrochloric acid, to remove the phosphate of lime, and then boiling them in water. It is probable that Nelson's Patent Gelatine is procured from isinglass. Its principal application in medicine is in making the Artificial Asses' Milk, which is prepared as follows:—Take of isinglass or Gelatine half an ounce, dissolve it, by the aid of heat, in a quart of barley water; add one ounce of refined sugar; then pour into the mixture a pint of new milk, and beat up the whole with a whisk. It should be drunk warm, and exercise taken after it. The Artificial Goat's Milk is thus made:—Take an ounce of fresh suet, cut into small pieces,



and tie them in a muslin bag large enough to leave the morsels free from the least degree of compression; boil this in a quart of cow's milk, sweetened with a drachm of white sugar candy. "This," says Dr. A. Thomson, "is an excellent article of diet in serofulous emaciation, especially when ordinary articles of food pass through the bowels nearly undigested, and also in the latter stages of pulmonary consumption." It may be used for infants who are, unfortunately, attempted to be brought up by the spoon.

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## GENTIAN

Is a valuable bitter tonic, and one of the most generally employed of this class of medicines. An excellent cathartic in constipation, attended with debility, is the Compound Gentian Mixture of the London Pharmacopœia. It is thus prepared:—

Compound Infusion of Gentian . . . . .	6 ounces.
Infusion of Senna . . . . .	3 ounces.
Compound Tincture of Cardamoms . . . . .	1 ounce.

Dose—from two to four tablespoonfuls.

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## GINGER

Is an excellent carminative stimulant, assisting in promoting feeble digestion, and of great service in the flatulency and dyspepsia of gouty and rheumatic habits. Combined with rhubarb, as in Gregory's Powder, it forms an excellent stomachic, especially where flatulency comes on before or after meals. The pungency and stimulant virtues of Ginger are too well known to require comment. The Concentrated Essence possesses all the aromatic properties and flavour of the Ginger in the highest state of perfection. In languor, or cases of temporary depression, no stimulant is preferable to the Aromatic Cordial Ginger.

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## GINGER BEER.

Dr. Pereira gives the following formula for the preparation of Ginger Beer, which (he says) yields a very superior and agreeable beverage, and one which will keep good for a long time. Take of—

White Sugar . . . . .	10 pounds.
Lemon Juice . . . . .	9 ounces.
Honey . . . . .	8 ounces.
Ginger, bruised . . . . .	16 ounces.
Water . . . . .	9 gallons.

Boil the Ginger in one gallon and a half of water for half an hour, then add the sugar, the lemon juice, and the honey, with the remainder of the water, and strain through a cloth; when cold, add the white of an egg and two drachms of essence of lemon. After standing four days, bottle.

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### GOULARD'S EXTRACT.

It is used externally only, as a cooling and astringent application to inflamed surfaces and old ulcers, and, if diluted in the proportion of ten drops to half a pint of pure water, with twenty drops of laudanum, it will be found serviceable as an eye-water in purulent ophthalmia. A lotion may be made with—

Goulard's Extract . . . . .	2 tea-spoonfuls.
Spirit of Wine . . . . .	2 tea-spoonfuls.
Distilled Water . . . . .	12 ounces.

It is very useful for burns and scalds, but it should not be applied to a raw or an ulcerated surface. An eye-water made with—

Acetate of Lead . . . . .	12 grains,
Distilled Vinegar . . . . .	2 drachms,
Filtered Rain Water . . . . .	8 ounces,

is an excellent application for inflammation of the eyes.

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### GOULARD WATER

Is made by adding a tea-spoonful of Extract of Goulard, with one of spirit of wine, to a pint of distilled water. This, too, is a good application to burns and inflammations, but it should not be used when the skin is broken.

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### GUM ARABIC.

Arabin, the chief component part of Gum Arabic, is one of the most nutritive of vegetable principles, and enters into the compo-

sition of the greater part of articles of food from the vegetable kingdom. The Arabic Lozenges are the most familiar and most useful of demulcents, and will be found an invaluable remedy in all kinds of hoarseness, sore throat, and cough. The simple solution of Gum Arabic in water is an excellent demulcent in acrid conditions of the bowels. The powder of Gum Arabic, mixed with a little water, is the best vehicle for administering calomel.

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### GUAIAIACUM

Is a stimulating diaphoretic, and well adapted for chronic rheumatism in the old and debilitated. The best of its officinal preparations is the Compound Tincture of Guaiacum, of which from one to three tea-spoonfuls may be taken occasionally, in water sweetened with sugar; the water alone precipitates the Guaiacum.

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### HARTSHORN SHAVINGS

Yield an excellent nutritive jelly, which, at one time, was held to possess peculiar restorative virtues. The following is the best form for making it:—Boil half a pound of Hartshorn Shavings in three pints of water, over a gentle fire, until it becomes a jelly; when a little hangs on a spoon it is sufficiently boiled. Strain it hot; put it into a well-tinned saucepan, add to it half a pint of Rhenish wine and a quarter of a pound of loaf sugar; beat the whites of four eggs to a froth, and stir sufficiently for the whites to mix well with the jelly; boil it two or three minutes; then add the juice of four lemons, and boil again two minutes more. When it is finely curdled and of a pure white, pass it through a linen bag into a china basin, until it becomes quite clear and of a fine amber colour.

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### SPIRIT OF HARTSHORN.

(See Salvolatile).—Dose—children, from six to twenty drops; adults, from twenty to forty drops. Effect—stimulant, for hysterics and convulsions. Combined with oil, it forms an excellent liniment (Liniment of Ammonia) for sore throats. It should be made by mixing two parts of oil with one of Hartshorn. When used in incipient sore throat, it ought not to be rubbed upon the

skin of the neck, but should be spread upon a bit of flannel, about six inches wide, doubled upon itself, then put round the neck, and covered with a silk handkerchief. By thus preventing the evaporation of the ammonia, the liniment acts powerfully as a local stimulant, relieving the internal inflammation, whilst its sympathetic operation upon the nervous system causes perspiration, and abates the fever which always accompanies sore throat.

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## HELLEBORE.

This substance is classed among the vegetable irritant poisons, and, very properly, but little esteemed in modern practice.

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## HONEY.

Is produced by several species of bees, but most abundantly by the *Apis mellifica*, the history of which is one of great interest. It is undoubtedly laxative, but it is apt to gripe and prove flatulent when given in quantity sufficient to move the intestines; and the older the honey the more likely these effects are to be produced: it is, therefore, seldom employed in this country for purgative purposes. When mixed with vinegar, it forms oxymel, and is used in various forms in medicine and pharmacy. It is much recommended to the asthmatic, and those subject to gravel complaints, from its detergent nature. Founded upon the popular opinion of honey being a pectoral remedy, Dr. Hill's balsam of honey was once in great demand; but this nostrum, besides honey, contained balsam of Tolu and gum Benjamin in solution.

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## HOPS.

The hop is a native of England. It has hitherto chiefly attracted attention as an article of commerce, from its importance as an ingredient in malt liquors. But it is also possessed of such medicinal properties as to entitle it to a place in the *Materia Medica*. The flowers of the plant, which only are used, are aromatic, bitter, astringent, and decidedly tonic and anodyne. Of the bitters, there is scarcely one more agreeable to an enfeebled stomach than the hop, and hence it is advantageously prescribed in dyspepsia, particularly where it proceeds from intemperance;

yet it is, perhaps, as a narcotic that it has the highest claims. As an anodyne, it may be substituted for opium, where the latter, from certain causes, does not suit the case. The hop has also been found serviceable in spasmodic uneasiness of the uterus either before or subsequently to delivery. It likewise possesses the power of procuring sleep in the delirium of fever, and in mania, when used as a pillow; and owing to this effect having been confirmed in the case of the late king, George III., its efficacy as a general narcotic, when introduced into the stomach, has been investigated. Dr. Maton observed, that besides allaying pain and producing sleep, the preparation of hops reduce the frequency, and increase the firmness of the pulse in a very direct manner. One drachm of the tincture and four grains of the extract, given once in six hours, reduced the pulsations from ninety-six to sixty in twenty-four hours. He found the extract exceedingly efficacious in allaying the pain of articular rheumatism. Hops may be given in the form of powder, infusion, tincture, or extract. The dose of the powder is from three grains to one scruple; that of the infusion, which is made with half an ounce of the hops and one pint of boiling water, is from two to three wine-glassfuls three times a day. The use of hops for preserving beer, and the cultivation of the plant, were introduced into England from Flanders about the middle of the sixteenth century. Since their introduction, many wholesome plants have undoubtedly been used as succedaneums when hops were scarce, and, of course, exorbitantly dear: as the roots of ginger and gentian; the seeds of colocynth or bitter apple; and the herbs of horehound, wormwood, broom, &c.

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### HOFFMAN'S ANODYNE.

Its uses and properties are similar to those of æther, which see. It is, however, miscible with water in all proportions. This preparation is often prescribed in combination with laudanum, the disagreeable subsequent effects of which it sometimes prevents. Dose—from half a tea-spoonful to two tea-spoonfuls.

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### HOREHOUND.

White Horehound was long held in high estimation as a tonic expectorant. In the present day it is commonly employed as a domestic remedy in chronic coughs. It is generally given in the

form of infusion (Horehound Tea), prepared by infusing an ounce of the herb in a pint of boiling water, of which the dose is a small wine-glassful, sweetened with sugar. Candied Horehound some prefer, a small bit of which is allowed to dissolve in the mouth frequently.

## HYDRIODATE OF POTASH

Has been very successfully used as a powerful alterative in a multiplicity of diseases. As a stimulant of the absorbent system, it has effected wonders in cases of bronchocle, scrofula, and other glandular tumours. It has also been used in chronic rheumatism, and in rheumatic enlargement of the joints. It is, however, a medicine which can only be administered with great risk, at the discretion merely of the invalid or his friends.

## ICELAND MOSS.

The medicinal properties of Iceland Moss, as a tonic and demulcent, are too well known to require any observation; but the mode of preparing it for domestic purposes may be found useful. The decoction is made as follows:—Take half an ounce of the Moss, pour upon it a pint of boiling water; allow it to stand two hours, and then boil for a quarter of an hour. Strain the liquor while it is hot. The jelly is a more pleasant form for taking the Moss, and answers every purpose of the decoction. It is thus prepared:—

Iceland Moss . . . . .	4 ounces.
Isinglass . . . . .	2 ounces.
Boiling Water . . . . .	4 pints.

Boil to half a pint, strain, and add sugar four ounces.

## INDIAN PINK.

Pink Root is much more active in the recent state than when dried. It is the most popular vermifuge in the United States for the expulsion of lumbrici, possessing, however, little or no power over any other species of intestinal worm. The dose of the powder, for a child of three or four years old, is from eight to sixteen grains; for an adult, one to two drachms. This quantity is

repeated every morning and evening for three days, and then followed by a brisk cathartic. But the best mode of taking it is the infusion, combining with the Pink Root an equal quantity of senna. The following are the proportions :—

Pink Root . . . . .	$\frac{1}{2}$ ounce.
Senna . . . . .	$\frac{1}{2}$ ounce.
Boiling Water . . . . .	1 pint.

Infuse two hours and strain. The dose, for a child of two or three years old, is from one to two table-spoonfuls; for an adult, from four to eight ounces.

## IODINE.

In common swelling of the glands of the neck, a portion of Iodine Ointment, about the size of a hazel-nut, rubbed on the diseased part morning and evening, has been found very efficacious. Great caution, however, is requisite in the employment of Iodine, as it is liable to produce serious derangement of the nervous system, even when it is displaying little apparent influence in other respects. Amongst the useful applications that have been made of Iodine, is one for the cure of corns. The following is the combination :—

Tincture of Iodine . . . . .	4 drachms.
Chloride of Antimony . . . . .	4 drachms.

To be applied by means of a camel hair pencil, after the corn has been well pared. Two or three applications are sufficient.

## IPECACUANHA

Is always a safe and, generally, an eligible emetic; it is mild, and yet sufficiently certain in its operation. It evacuates the contents of the stomach without exciting violent vomiting, or extending its action beyond this organ; it is hence adapted to cases where an excess of effect would be prejudicial, and, as a mere evacuant, is preferable to every other emetic. The mildness and certainty of its operation render it also the emetic best adapted for children. The medium dose of it is fifteen grains to an adult, though twenty or thirty may be taken with perfect safety, as it only operates more speedily, and a full dose produces less nausea than a small one. When retching comes on, and not



before, moderate draughts of chamomile tea or warm water should be taken, to promote its operation. The emetic dose should be taken in about two table-spoonfuls of any aromatic water. If the powder be taken in a large quantity of liquid, or if warm water be too copiously swallowed immediately after taking it, vomiting is apt to come on too rapidly, and the contents of the cardiac portion of the stomach only are thrown off, while the pyloric end escapes the evacuation. In cases of hernia, in decided fulness of the cerebral vessels, and in advanced pregnancy, emetics are obviously improper. On account of its flavour and the mildness of its operation, the Ipecacuanha Wine is preferred as an emetic for children. The dose is from twenty to sixty drops, according to the age of the child. "When a child becomes hoarse, and begins to cough," says Dr. Cheyne, "let every kind of stimulating food be withdrawn; let him be confined to an apartment of agreeable warmth; have a tepid bath; and take a tea-spoonful of the following mixture every hour, or every two hours if it produces sickness:—

Ipecacuanha Wine . . . . .	3 drachms.
Syrup of Tolu . . . . .	5 drachms.
Mucilage of Gum Arabic . . . . .	1 ounce.

Mix.

This will probably avert all danger. Whereas, if no change be made in the quality of the food, and if he be sent into the open air, he will, without doubt, suffer from an attack of bronchitis or croup."

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## IRON.

This metal has been regarded as the most salutary to the animal system, and it is the only one having any sensible activity, which has no poisonous quality. The medicinal effects of Iron are tonic. It is in diseases of debility that it is employed, and, as its operation is only gradual, chiefly in chronic affections, the preparations of Iron are improper where there is any tendency to inflammatory action, or a plethoric state of the vessels; and its administration ought to be suspended when it renders the pulse quick, or when it occasions a sense of fulness, headache, or costiveness. It is unnecessary here to detail the numerous preparations of Iron which are medicinally employed. Its general effects have been stated; and an unprofessional person, ignorant of the medicinal treatment of disease, should hesitate very seriously in its employment.



## ISINGLASS.

For the compounds of the pastry-cook, and as an article of food to the wealthy, Isinglass is in great request. As some care and attention is necessary in dissolving Isinglass for the luxuries of the table, and as the best mode of effecting it is not generally known, the following, as directed by M. Ude, is given:—"To melt a quarter of a pound of Isinglass," he says, "take a little more than a pint of water, into which throw the twelfth part of the white of an egg; beat the water well till it becomes white; throw the Isinglass into the water, and lay it on the stove, over a very slow fire. If you keep it covered it will melt more easily. Take care it does not burn, for then it can never be made clear, and, besides, it would have an unpleasant taste. For a larger quantity put more water, but not more white of egg. In order to make cream or jellies in perfection, try a little in a small mould; if the jelly should not be firm enough, add a little more Isinglass. It is impossible to determine the exact quantity that is required for creams or jellies, as the dishes and moulds are never of the same dimensions." Orange jelly may be made from melted Isinglass in the following manner:—Grate the rind of two oranges, and upon it squeeze the juice of six, which should be fine, large, and sweet. To this juice add a quarter of a pint of melted Isinglass. Then make a syrup, by boiling water with a little lemon peel in it, and adding sufficient refined sugar, letting the whole boil till of a fine amber colour; mix in the juice and Isinglass over the fire, but do not allow the mixture to boil. With proper management, a quart of fine jelly may be thus produced. The juice of lemons, or that of any other fruit, may be employed instead of oranges, and many varieties of jelly be thus made. As the juice of most other fruits gelatinises with heat, a smaller proportion of Isinglass will suffice. The mixture alone of milk and Isinglass, sweetened with sugar, forms a very nutritive jelly, extremely grateful and beneficial to invalids. "A medical man," says M. Ude, "once demanded of me why cooks had not weights and measures, the same as apothecaries? To which I incontinently replied, 'Because we taste our recipes, whereas, doctors seldom taste theirs.'" This bit of waggery is too good to be omitted, as it shows the line upon which M. Ude places the art—it certainly is an art—he practises. Besides its application to the purposes of the table, the melted Isinglass of M. Ude, if diluted with hot water and strained, forms an excellent size for water-coloured drawings, and paintings in body colour,

and likewise for water gilding. It may be used also to clarify coffee, wine, and liquors. The manufacturers of artificial pearls employ it to fix in the interior surface of the hollow glass globules, which give the necessary form to these pearls, the substance, called ESSENCE D'ORIENT, whence they derive their pearly lustre and odour. By means of a cement of Isinglass, dissolved with gum ammoniacum in alcohol, the Turkish and Armenian lapidaries and jewellers set their precious stones, and so firm do these remain in their settings, that there is no probability of their separating by any chance violence. Watch cases, locketts, snuff boxes, and various other articles of gold and silver, are set with diamonds and precious stones, by the stones being glued on with this cement. There is, however, a better cement, called the Diamond Cement, made of the same materials, and so limpid that even precious stones, when broken, may be joined with it, and the fracture be invisible. It is most valuable for joining broken china or glass. The following receipt for making it, which answers exceedingly well, is given on the authority of Dr. Ure:—"Take of Isinglass one ounce, distilled water six ounces, boil these together until reduced to three measured ounces of liquid; then add a fluid ounce and a half of rectified spirit of wine. Boil the whole together for two minutes; strain it, and, while hot, add to it, first, half an ounce of strong milky emulsion of gum ammoniacum, and then, five drachms of an alcoholic solution of mastic." The correctness of this receipt has been frequently tested.

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### JALAP.

This is one of the safest and most efficacious purgatives, in the dose of between half a scruple and half a drachm. It is often advantageously combined with a few grains of calomel, also with cream of tartar, forming the Compound Powder of Jalap, a not less favourite and excellent remedy. Its dose is about double that of the simple powder. "Purgative Biscuits.—For years, in some families, aperient medicine, when occasionally required, has been administered in this form. There can be no objection to this, if it lessen the child's *misery* in taking physic; but these biscuits must be carefully made and carefully used. The Montpellier Hospital has the following formula, which, as its purgative quality is *Jalap*, should not be given to very young children: it is extracted from the works of Drs. Maunsell and Evanson:—Take an ounce of flour, and an ounce of sugar, two eggs, and one

drachm of powder of Jalap; let these biseuits be made, a quarter of one of which will contain five grains of Jalap, and may be taken once or twice a day, according to the effect." Where the intestines are to be thoroughly evacuated, this powder will be found effectual:—

Jalap . . . . .	15 grains.
Calomel . . . . .	3 grains.

To be taken in gruel. Mr. Brande recommends the following as a useful purge for schoolboys who have over-eaten themselves:—

Jalap . . . . .	1 scruple.
Infusion of Senna . . . . .	1 ounce.
Tincture of Senna . . . . .	1 drachm.

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## KREOSOTE

Is an efficacious local remedy for allaying the toothache. For this purpose it must be used in the concentrated state, one or two drops being introduced into the hollow of the tooth, on a little raw cotton. As an internal agent, it should be administered only under the direction of a medical man. Kreosote possesses all the antiseptic properties of wood smoke, pyroligneous acid, and tar, not only being more speedy and convenient in the form of its application, but conferring on the substance immersed in it the same well-known smoky flavour. Immersion in Kreosote water (prepared by mixing *one* part of Kreosote with eighty parts of water) will prevent flesh from decaying, even in warm moist air. Kreosote water may be used most conveniently instead of wood smoke or pyroligneous acid for curing hams, sausages, tongues, and the like, and is evidently the aromatic and preservative principles of these articles when cured by the ordinary process of smoking. Fresh meat, having lain from half an hour to an hour in Kreosote water, may be freely suspended in the open air of summer, or in the heat of the sun, without acquiring any putrefactive taint; on the contrary, it becomes, in about eight days, dry, hard, and brittle, of a red brown colour, and of the flavour of good smoked meat. Fish, treated with Kreosote water, succeeds equally well. A few drops in a saucer, or on a piece of spongy paper, if placed in a larder, will effectually drive away insects, and make the meat keep several days longer than otherwise.

## LACTUCARIUM

Has been strongly recommended by the late Dr. Duncan, in doses of from two to six grains, as a substitute for opium, in allaying muscular action, alleviating pain, and inducing sleep, the three great qualities of opium.

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## LAUDANUM.

Although no family can long be without laudanum in the house, yet it is one of those medicines which, even when it is likely to prove useful, ought to be administered with great discretion and judgment. "Every pain which is suffered," says Dr. Thomson, "is not of a description to be relieved by Laudanum, without detriment to the general system; hence, those pains only, the nature of which are generally well understood, should be *domestically* treated with Laudanum." Tooth-ache, old chronic pains of rheumatism, sudden cramps of the stomach, may be safely allayed with a full dose, namely, twenty drops of Laudanum for an adult. In those subject to gall stones, the sickness and pain may be relieved in the same manner, by a dose of thirty drops, until medical assistance can be procured. The influence of Laudanum increases in the inverse ratio of the age of the individual; the younger the patient, the more energetic is its action, and on this account it ought never to be administered to children or to infants without the authority of the medical attendant. Laudanum, as a domestic medicine, is both safer and often more useful when it is applied to the surface of the body, than when it is internally administered. It may be rubbed upon the abdomen in colic, upon the spine in cough, and on the arms to subdue habitual wakefulness. In burns, a piece of lint, soaked in Laudanum, and kept applied to the pained parts, and repeatedly moistened with the Laudanum, allays the pain, and affords great comfort to the sufferer. Beyond these simple maladies, Laudanum should never be applied without medical advice. *When Laudanum has been taken as a poison, immediately excite vomiting, by giving ten grains of sulphate of zinc, dissolved in a wineglassful of pure water, and repeat, if necessary.*

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## LEMON JUICE.

Public attention has not hitherto been sufficiently alive to the

use of Lemon Juice as a simple and efficacious preventive of that dreadful disease, scurvy. Some slight idea may be formed of its ravages by quotations from Dr. Elliotson, whose high professional reputation will be a sufficient guarantee as to the efficacy of the specific: he says—"Lord Anson lost half his crew in six months by scurvy; out of 961 men, he had left, at the end of the year, 335, and only seventy-one were fit for duty at the end of the second year. Whilst the ship's company of Lord Anson suffered so greatly, the crew of Captain Cook, in their voyage subsequently performed, suffered little or nothing." And why? Because Captain Cook possessed a good supply of soup, sour krout and fresh meat, and compelled his crew to regular exercise. He was also exceedingly particular with respect to extreme cleanliness and good ventilation, and the company were only absent from land about three weeks at the longest. But, *should there be no fresh provisions, if there be a good supply of Lemon Juice on board, it will be an excellent substitute; and occasionally, if all the other particulars are neglected, Lemon Juice proves a preventive of the disease.* "Scurvy," says Dr. Elliotson, "was formerly believed to be incurable, but experience has taught us to cure it with facility. The usual plan consists in giving three table-spoonfuls every morning to each patient, for the purpose of preventing the disease. It may be preserved by mixing one-tenth part of spirit with it." As an illustration of the efficacy of this remedy we may mention, that the *Suffolk* did not communicate with the land for twenty weeks and one day, and yet they had only fifteen sick during the voyage, and those fifteen were but slightly affected, and were speedily cured by the augmentation of the first allowance of two-thirds of an ounce of this Juice; and on her arrival not a man had the scurvy. The Channel fleet, in 1800, consisted of twenty-four ships of the line, besides smaller vessels, and had no fresh provisions for sixteen weeks; but the men had plenty of Lemon Juice, and not a single case of scurvy occurred. The Channel fleet, in 1789, could not be kept at sea beyond ten weeks, for the crew were worn out with scurvy, and 2,500 men were sent into port with this disease. It is stated in Purchas's "Pilgrim," that Commodore Lancashire sailed from England, with three other ships, for the Cape of Good Hope, on the 2d of April, and arrived in Saldanah Bay on the 1st of August. The crew were in perfect health, because he caused three table-spoonfuls of Lemon Juice to be given daily to each of the company; but the other ships' companies were so sickly as to be unable to perform duty, and the Commodore was compelled to send a supply of men to take in their sails and to hoist out their

boats. It should be mentioned, by way of caution, that as some have supposed vinegar would be a good substitute for Lemon Juice, in cases of scurvy, Dr. Elliotson says, "the administration of vinegar has very little power over the disease." With regard to local application, it is to be observed, that Lemon Juice is one of the best when there is a scorbutic ulcer. Evidence of a similar tendency might be multiplied greatly, but this will be sufficient to show the great utility of the article in the navy—in emigrant and other ships making long voyages; and it is much to be regretted that it has not been more generally used. There can, therefore, be no doubt of the great utility of this specific; and the cost need be no obstacle, as it can be obtained, in perfection, at about the price of vinegar, on application to the wholesale confectioners, or the foreign fruit brokers. The following is an excellent form for artificial Lemon Juice:—

Citric Acid . . . . .	2 $\frac{1}{4}$ ounce.
Gum Arabic . . . . .	$\frac{1}{2}$ ounce.
Fresh Lemon Juice, . . . . .	$\frac{3}{4}$ ounce.
Loaf Sugar . . . . .	2 ounces.
Boiling Water . . . . .	1 quart.

Macerate for twelve hours; then add twenty drops of essence of lemon, dissolved in half an ounce of spirit of wine, and strain. Lemonade, an agreeable cooling drink in fevers, is thus made:—Infuse two lemons (sliced) in a pint of boiling water, for an hour, then strain, and add two ounces of sugar. Portable Lemonade is thus formed—

Citric Acid . . . . .	1 ounce.
Finely powdered Loaf Sugar . . . . .	8 ounces.
Essence of Lemon . . . . .	20 drops.

Two or three teaspoonfuls in water will make a very pleasant glass of Lemonade.

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## LEECHES.

The part to which Leeches are intended to be applied should be washed with a little soap and warm water, then with simple cold water, and, lastly, well dried. If the part be hot and inflamed, the Leeches should be put for a few minutes into tepid water; and this should be done, also, when they are to be applied in the mouth, or to any part of the body warmer than the general surface. Immediately before they are used they should be dried, by rolling them in a clean soft towel; then place them in the lid



of a ship pill box, and apply to the affected part. Dr. Anthony Thomson considers "that the easiest and best mode of applying them is—first, to place the number to be used in a hollow in a towel (made with the points of the fingers), folded like a napkin; then so turn the towel and the leeches upon the part where it is intended they should fix, that the towel will cover them, and the hand be kept over the towel to prevent their escape, until they all bite, which usually happens in a few minutes, then the towel may be removed. If this plan, however," he adds, "cannot be pursued, owing to the nature of the part to which they are applied, then the simplest method is to scratch the skin with the point of a needle, and to apply the Leech to the spot moistened with the blood. (We have seen them made to bite by moistening the surface to which they are to be applied, with sugar and water, or milk.) A narrow tube, called a Leech-glass, will be found useful when we wish to affix one inside the mouth, or to any particular spot." Leeches should never be forcibly detached, as their teeth are apt to separate, and, being left in the wound, to cause an erysipelatous inflammation on the part. They should be permitted to drop off spontaneously, which, being the effect of temporary suffocation, all muscular energy ceases in the animal, and the teeth shrinking, it drops off entire. When they have all dropped off, the bleeding may be kept up for an hour and upwards by fomenting the part, or, if more convenient for the patient, by a succession of poultices. Twice as much blood may be usually withdrawn by fomentations as by the suction of the Leech. A single Leech, when applied successfully, may thus be held to draw, on an average, about a tablespoonful of blood. If the bleeding does not stop spontaneously, it may generally be checked by the application of a piece of soft dry lint. Sometimes, however, the bleeding is with difficulty controlled, especially in children. "I have twice," says Professor Christison, "known children to bleed to death in this way in hospital practice, the nurses having laboured under the common prejudice that Leech-bites cannot bleed too much. Pressure will always arrest such bleeding; but in some cases it is evidently impossible to apply adequate pressure. It is proper, therefore," he adds, "in young patients, to select for the application of Leeches a part which admits of pressure, a part, for example, over a bone, or any other resisting medium, and not the abdomen or neck, or any soft part destitute of firm support underneath." It sometimes happens that, in strong men, the bleeding from a Leech-bite is exceedingly troublesome, it then becomes necessary to stop it with vinegar, or a strong hot solution of alum; in more obstinate cases a ligature of thread must be

resorted to; but here, of course, surgical aid will be sought. An important object in the management of Leeches is to render them soon serviceable again after they have sucked. It has been recently stated, that they may be rendered, in a few days, as active and useful as ever, by dissolving a little white sugar in the water, and renewing this solution twice, at intervals of twelve hours, and twice afterwards, at intervals of a day. Professor Christison has tried this plan, and found that the same Leeches drew blood three times at intervals of three days, with scarcely any diminution of activity, and without a death among them.

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### LENITIVE ELECTUARY.

An old and favourite preparation, and one of the mildest of the more effectual laxative compositions in the pharmacopœias. The dose is from two to four teaspoonfuls. When the bowels are sluggish, or where it is required to keep them more than usually active, a teaspoonful may be taken night and morning, as occasion requires. The preparation of this Electuary is troublesome and expensive, and it is generally spurious, containing neither senna nor the pulps of fruits.

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### LINSEED

Is emollient and demulcent. The best form for internal use is Linseed Tea, made by infusing an ounce of Linseed and half an ounce of liquorice root in two pints of boiling water for four hours. It may be sweetened with honey, which some think increases its emollient properties. The dose is a small teacupful. A liniment, composed of equal parts of Linseed Oil and lime water, is an excellent application to recent scalds and burns.

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### MAGNESIA

Is antacid and laxative. It is in great request in dyspepsia attended with acidity, from the advantage of its being gently aperient. Serious mischief, however, has resulted from the continuous administration of Magnesia in powder, by its accumulation in the bowels: to obviate this objection, the "Pure Fluid Magnesia," rendered so by an excess of carbonic acid, was prepared.



In calculous affections, in gastrodynia, in infantile complaints, and in all cases where Magnesia is serviceable, this mode of administering it will be found most effectual. The following is very useful in heartburn and most cases of acidity of the stomach. Take of—

Fluid Magnesia . . . . .	1½ ounce.
Essence of Peppermint . . . . .	10 drops.
Tincture of Orange Peel . . . . .	1 drachm.

Mix, for a draught—to be taken occasionally. If the bowels are costive, add one scruple of rhubarb to the draught.

## MANNA

Used to be regarded as a species of sugar, but, according to Dr. Prout, it consists chiefly of a principle named Mannite, which differs from sugar in not being susceptible of fermentation. Manna has a sweet and somewhat nauseous taste. Its medical effects are somewhat laxative; though mild in its operation, it is apt occasionally to produce flatulence and griping, and hence it is principally used in combination with other cathartics, particularly with senna, the bitter taste of which it covers. This combination is in common use as a purgative to children.

## MERCURY WITH CHALK (GRAY POWDER).

This is one of the mildest of the Mercurial preparations, and is frequently given to children as an alterative, and to correct the biliary secretion, and especially to increase it when deficient in quantity, and when the stools are clay-coloured or white. Its extreme mildness requires that its use should be continued. Dose—for a child three years old, two grains.

## MINDERERUS SPIRIT

Is an excellent and efficient diaphoretic. Its operation should be promoted by tepid drinks, and by the surface of the body being kept warm, as otherwise it is apt to pass off by the kidneys. It is easily retained on the stomach, and often allays the irritability of that organ. The usual dose is from four to twelve drachms;

but the following mixture is the most convenient form for administering it as a diaphoretic—

Mindererus Spirit . . . . .	2 ounces.
Nitre . . . . .	1 scruple.
Simple Syrup . . . . .	1 ounce.
Orange Flower Water . . . . .	1 ounce.
Camphor Mixture . . . . .	4 ounces.

Dose—two tablespoonfuls every four hours.

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## MORPHIA.

The administration of Morphia, and its preparations, should be left entirely to the physician. (*See Opium.*)

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## MUSTARD

Applied to the surface of the body acts as a local irritant, producing inflammation attended with much pain, and, if the application be long continued, it blisters. It is very generally employed in the form of cataplasm (poultice) to the soles of the feet or calves of the legs, in cases in which there is determination to the head. The best plan of preparing the poultice is, simply to mix common table mustard with lukewarm water, and spread it on a piece of linen. Mustard poultices produce inflammation in from fifteen to twenty minutes: the length of time they should be left on must be regulated by the feelings of the patient, but if he be insensible, they should be removed as soon as the skin is reddened.

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## MYRRH

Is a valuable stimulating tonic; it improves the appetite, and generally agrees well with the stomachs of delicate persons, especially when the bowels have a relaxed tendency. The alcoholic solution has long been used as a tooth tincture, and, with the addition of borax, is sanctioned by the highest authority as being the best detergent application for the teeth and gums.

## NITRE

In the present day is principally employed for its refrigerant properties. Nitre Whey, prepared by boiling two drachms of Nitre in a pint of new milk and straining, is an excellent cooling drink in mild febrile diseases. Dose—from two to four ounces. A small portion of Nitre kept in the mouth, and allowed to dissolve slowly, often checks the progress of commencing inflammatory sore throat. It is also a good addition to gargles for inflammatory sore throat, as in the following—

Nitre . . . . .	1½ drachm.
Honey . . . . .	2 ounces.
Rose Water . . . . .	6 ounces.

When Nitre produces spasm in the stomach, it should be discontinued.

## OIL OF AMBER.

This oil was formerly administered as an antispasmodic in hysteria, hooping-cough, and other convulsive diseases, in doses of from five to twenty drops, diffused in aqueous fluids by means of mucilage. It has been found very useful in water-brash, in doses of ten drops three times a day. Externally, it is applied as an embrocation to the chest in hooping-cough, in the following proportions:—

Take of	R
Camphorated spirit, half an ounce.	Sp. camphoræ 3ss.
Laudanum, two drachms.	Tinct. opii ʒij.
Oil of Amber, two drachms.	Olei succin. ʒij.
Oil of Almonds, four drachms.	Olei amygd. 3ss.
Mix.	Misce.

Of this compound a small quantity may be used night and morning.

## OIL OF CAJEPUT.

This oil, when diluted with an equal quantity of olive oil, is a useful rubefacient in gout and rheumatism, and assists also in restoring vigour to joints weakened by sprains. When taken internally it causes a glow, fills the pulse, and excites greatly the

nervous system : and, from determining to the surface and equalizing the circulation, it was much prescribed by the late Sir M. Tierney and others, in malignant cholera, in doses of twenty to thirty drops every two or three hours.

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### OIL OF JUNIPER.

This oil possesses stimulant, carminative, and stomachic virtues, in the dose of from two to four drops, and in a larger dose proves highly diuretic. It is often employed in the cure of dropsical complaints, when the indication is to provoke the urinary discharge. Oil of juniper gives the flavour to what is termed in this country gin, and which was originally an imitation of Hollands, and was also rectified from juniper ; but the greater part of the gin now used is made from Scotch and Irish whiskey rectified on turpentine. If the spirit were good, the English gin is a better diuretic than Hollands, inasmuch as the oil of turpentine is a superior diuretic to the oil of juniper.

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### OINTMENT, BASILICON,

Is in general used as a stimulant and detergent, and therefore forms an excellent dressing for foul and indolent ulcers.

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### OINTMENT, CITRINE.

This ointment is of very extensive utility in eruptive and herpetic diseases, scaldhead, purulent and chronic ophthalmia, indolent tumours on the margin of the eyelid, and scrofulous ulcers. When intended to be used to the eyes, it should be mixed with an equal quantity of hog's lard, and applied, previously softened, almost liquefied, upon a camel-hair pencil, on going to bed.

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### OINTMENT, MERCURIAL, STRONG,

Is in very general use for mercurial frictions. It may be employed in almost all cases where mercury is indicated, but it requires the direction of a medical man.

## OINTMENT, SULPHUR.

The intention of this ointment is to cure the itch, which it generally does more certainly than any other remedy; but its offensive smell occasions it to be used by most people with great reluctance. Two or three inunctions are in general sufficient for the cure, provided the patient wears his linen without changing for a few days.

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## OINTMENT OF ZINC

Is a very useful application in chronic ophthalmia, relaxed ulcers, sore nipples, and for removing ring-worm, particularly when it attacks the scalp.

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## OPIUM.

Of all the articles of the *Materia Medica*, this is, perhaps, the most extensively useful; there being scarcely one morbid affection or disordered condition of the system in which, under certain circumstances, it is not exhibited, either alone or in combination. It is certainly the most sovereign remedy for easing pain and procuring sleep; but, like other powerful medicines, it becomes, when improperly administered, highly noxious to the human constitution, and even productive of death.

It is the chief narcotic now employed; it acts directly upon the nervous power, diminishing the sensibility, irritability, and mobility of the system; thereby inducing sleep, one of its principal effects. From this sedative power of opium, by which it allays pains, inordinate action, and restlessness, it naturally follows that it may be employed with great advantage in a variety of diseases. In febrile affections, opium is useful where there are no high inflammatory symptoms. In typhoid fevers it allays irritability and watchfulness, quiets many nervous symptoms, prevents inordinate relaxation of the bowels, and tends, in combination with ammoniacal stimulants and bitters, to support the general powers of the system. In acute and chronic rheumatism, opium is a most important remedy; when it is so managed as to produce sweat, it will tend to remove an inflammatory state of the system, and may generally prove useful; a notable instance of this we observe in the cure of acute rheumatism by means of Dover's powder. In

all obstinate and irritating coughs, where inflammatory action is not predominant, an opiate at bedtime is always palliative, and often curative. In eruptive diseases, opiates are beneficial: but they must be cautiously administered, more particularly in reference to the state of the bowels.

The requisite dose of opium varies in different persons, as well as in different states of the same person. A quarter of a grain in one adult will produce effects which ten times the quantity will not do in another. The lowest fatal dose to those unaccustomed to it seems to be about four grains. When given in too small a dose, it often produces disturbed sleep and other unpleasant consequences; and, on the other hand, a small dose will sometimes produce sound sleep and alleviation of symptoms, when a larger one would not have succeeded.

There are certain circumstances necessary to be attended to in regard to the administration of opium; first, age may be mentioned as having a powerful influence in modifying its action. The younger the individual, the more energetic is its action on the system; hence the great caution requisite in its administration to infants; in fact, it should never be resorted to in any form except upon emergencies; and all opiates, especially syrup of poppies and some nostrums containing opium, which are but too frequently used by lazy nurses to quiet children, should be most imperiously excluded from the list of nursery medicines. Sex influences the operation of opium less than other circumstances, but still it exerts some influence; and we find that spasms and obstinate vomitings more frequently follow its use in women than in men.

Opium is also well known to be more dangerous in those of a sanguine than those of a melancholic temperament.

Climate modifies considerably the effects of opium. In those who pass from colder to warmer climates, smaller doses of it are requisite to produce the desired effect than were necessary in the climate from which they have passed.

Persons habituated to opium will frequently bear very large doses with little effect. Many instances are recorded of the enormous doses which have been taken with impunity by individuals who have long accustomed themselves to the use of this narcotic. As very great caution is therefore necessary in ascertaining the proper dose and time of administration, as well as the symptoms to which it is applicable, the use of opium had better be left to the decision of the experienced physician.

### OPODELDOC.

This is an excellent liniment in rheumatic affections and local pains: the soap is itself a stimulant, and prevents rapid drying upon the part—the camphor and spirit stimulate—and the oil of rosemary gives it a pleasant odour. It is a good addition to other liniments: mixed with tincture of cantharides, in equal portions, it is rendered more effectively stimulant and rubefacient; and, with the addition of one-fourth of laudanum to the Opodeldoc, it forms one of the best sedative liniments.

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### OXYMEL OF SQUILLS.

A mixture of equal parts of this Oxymel and syrup of poppy, is a valuable sedative expectorant when taken in small and often repeated doses; and when gently swallowed in an undiluted state, it allays the irritation of a catarrhal cough and hoarseness.

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### PAREGORIC ELIXIR

Is a useful anodyne in chronic asthma and hooping-cough, after the inflammatory symptoms have abated. At the commencement of a common cough in children, the following mixture will frequently be found of great service, the bowels having been previously opened:—

Simple Syrup . . . . .	2 ounces.
Antimonial Wine . . . . .	1 drachm.
Paregoric Elixir . . . . .	1 drachm.
Tincture of Tolu . . . . .	12 drops.
Mix.	

A tea-spoonful may be given three or four times a day in a little warm barley water, when the cough is troublesome.

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### PEARL BARLEY

Is employed in medicine, in the form of decoction, as an emollient and demulcent drink in febrile and inflammatory affections, and as a vehicle for other remedies. The Barley Water is best made by taking two ounces and a half of Pearl Barley, and wash-



ing it well with water, that the foreign matters adhering to the Barley may be detached; pour upon it half a pint of water, and boil it a little. Throw away this water, and add to the Barley two quarts of boiling water; boil down to two pints and strain. The *Compound Barley Water*, prepared according to the following form in the London Pharmacopœia, will be received with pleasure by the most delicate palate. Take of—

Barley Water, as above . . . . .	2 pints.
Figs, sliced . . . . .	2½ ounces.
Liquorice Root, sliced . . . . .	5 drachms.
Raisins . . . . .	2½ ounces.
Water . . . . .	1 pint.

Boil down to two pints and strain. This is an elegant and agreeable drink in ardent fevers and inflammatory disorders; it assuages thirst and soothes the irritability of the stomach. Equal parts of plain Barley Water and new milk, with a small portion of refined sugar, are a good substitute for the nurse's milk, when infants are unfortunately brought up by the spoon.

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### PLASTER, ADHESIVE.

(See Adhesive Plaster.)

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### PLASTER, DIACHYLON.

These plasters are used for keeping on other dressings, and for retaining the edges of recent wounds together. They are also much employed for the relief of corns and bunions.

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### PLASTER, BELLADONNA,

Is a useful local application for the relief of neuralgie and chronic rheumatic pains.

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### PLASTER, BURGUNDY PITCH.

Spread on leather, this plaster forms an excellent rubefacient, occasioning a slight irritation, though rarely amounting to a blis-



ter. A plaster worn on the chest often does good in protracted coughs, in hooping-cough, and in asthma. It is sometimes useful in rheumatic and other painful affections, when applied over the seat of the complaint. It is also an excellent preventive of coughs.

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### PLASTER, SOAP,

Is a mild discentient, and is deemed a useful application to tumours of various kinds. In cases of sprains, and slight enlargement of joints from accidents, it is commonly employed in preference to any other plaster.

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### POMEGRANATE BARK.

The chief use of this bark is as an astringent in chronic diarrhœa and in dysentery, and as an injection in *fluor albus*. It has, also, been much used in India as a remedy for tape-worm, for which a decoction is prepared with two ounces of the fresh bark, boiled in a pint and a half of water until only three-quarters of a pint remain. The worm is frequently voided after the first dose of two ounces; but the same quantity may be repeated for six or seven times in succession, at intervals of an hour.

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### POMEGRANATE PEEL

Is also a powerful astringent, and has long been successfully employed externally, internally, and in gargles, and for diarrhœa, &c. The decoction is the form in which it is usually given, in the same doses as the decoction of the bark.

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### POPPY HEADS,

With their preparations, possess all the properties of opium. The syrup has been thought by some to be less liable than opium to the disadvantage of causing headache and sickness; but this fact is far from being well-established. It should not be given to children without the utmost caution, and by no means trusted to nurses, for, owing to its irregular strength, it has sometimes occa-

sioned dangerous accidents; a teaspoonful has proved fatal to a healthy infant. It may be conveniently combined with small doses of oxymel of squills, to allay the violence of cough. Decoction of Poppy is intended as an anodyne fomentation, but it is seldom more effectual than warm water. A mixture of laudanum and hot water may be more conveniently adopted where such an application is required.

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### POTASH BICARBONATE.

In that form of dyspepsia which is attended by excess of acid in the stomach, and which appears to result from disordered gastric secretion, Bicarbonate of Potash is a valuable remedy; but it is only to be regarded as a chemical palliative, affording temporary relief by neutralising the free acid, which is the proximate cause of the symptoms. Its dose as an antacid, is from ten to twenty grains, given in simple solution in water, or, if preferred, it may be sweetened. (For Effervescing Powders, see Soda.)

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### POTASSÆ LIQUOR (SOLUTION OF POTASH).

In dyspepsia, attended with acid eructations, heartburn, or gastrodynia, Liquor Potassæ is taken with much benefit. It not only neutralises the free acid, but also counteracts the morbid tendency of the stomach to acidulous secretion. Dose—ten drops, gradually increased to forty. It should be largely diluted. Fresh table beer or veal broth are said to conceal its nauseous taste: taken, however, in combination with some aromatic bitter, such as an infusion of gentian or calumba, it is generally found most beneficial. Brandish's Alkaline Solution is a preparation very similar to Liquor Potassæ, but it varies considerably in strength.

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### POULTICES.

The best emollient Poultices are common bread-and-water Poultices, prepared by soaking bread in *boiling water*, to a proper consistence; or one composed of bread-crumbs, linseed meal, and water.

## QUASSIA

Is amongst the most powerful of the pure bitters, and is essentially tonic. It is chiefly used in dyspepsia, resulting from weakness of the digestive organs, and is found particularly useful in that form of it which is produced by dissipation. The infusion, made by adding two scruples of Quassia to a pint of boiling water, is most generally employed. A solution of sulphate of iron in this infusion is a most efficacious remedy for worms. Take of—

Sulphate of Iron . . . . .	1 scruple.
Infusion of Quassia . . . . .	8 ounces.
Mix.	

Dose—for an adult, two tablespoonfuls every morning, fasting.

## QUINCE SEEDS

Are employed in medicine only on account of the mucilage which they yield: this mucilage is employed externally as an emollient and sheathing application to cracked lips and nipples. Bandoline, which is used by hairdressers as a cement for dressing the hair in braids, is merely this mucilage evaporated, and scented with Eau de Cologne.

## QUININE, SULPHATE OF.

The introduction of this substance is one of the greatest improvements effected in the Materia Medica in modern times. The Quinine is, not without reason, believed to possess all the virtues of the bark, without any of its many and serious disadvantages. In cases of violent periodic headache it is most useful; it is also a powerful tonic; and in recovering from low fever and other severe diseases, and in convalescence from nearly all debilitating complaints, the Quinine is often prescribed with great advantage. The simplest mode of administration is the Aromatic Tincture of Quinine, introduced by the late Sir H. Hall, which is a most valuable and stomachic tonic in dyspepsia, depending upon enfeebled or depraved digestion. In dyspepsia, as a stomachic, the following draught is often serviceable:

Quinine : . . . . .	1 grain.
Elixir of Vitriol . . . . .	5 drops.
Water . . . . .	1 ounce.
Syrup of Orange Peel . . . . .	1 drachm.

Mix, and take occasionally.

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### RHUBARB.

The special applications of this drug in medicine are numerous. It is one of the best laxatives for general use in infancy, for it is not apt to act with unexpected violence, and its tonic and astringent virtues render it peculiarly fit for the treatment of many infantile diseases attended with enfeebled digestion and irritation in the alimentary canal. Rhubarb acts either as a purgative or an astringent, according to the dose. In doses of from twelve to twenty grains, combined with the same quantity of magnesia, and half the quantity of ginger, it forms an excellent domestic purgative in a dyspeptic condition of the stomach. In doses of five or six grains, combined with two of cinnamon powder, it operates as an astringent in diarrhoea from weak bowels. The Infusion of Rhubarb is a useful addition to chalk in the purging of teething children: it is made with a quarter of an ounce of grated Rhubarb and six fluid ounces of boiling water: when cold, strain, and add one scruple of prepared chalk. A dessertspoonful is a dose for a child one year old. In consequence of its tendency to induce ultimate constipation, Rhubarb is not, when given alone, an elegant purgative for habitual use; for this purpose the Compound Rhubarb Pill is a most important and effective combination. It acts more immediately on the stomach and small intestines, and, therefore, in relaxed and debilitated states of these organs, it will prove an easy and valuable resource. The *tonic* properties of Rhubarb are more efficiently procured in the Cordial Tincture. In this form it acts directly as a stimulant, and, secondly, as a carminative, and ranks amongst the highest of medicines for indigestion in persons of gouty habits.

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### ROCHELLE SALT (TARTARISED SODA).

A mild cooling laxative, not so active as most of the other saline cathartics, but its taste is much less disagreeable. It is seldom prescribed alone, but is in very general use as the active ingredient in the commonly called Seidlitz Powders. These

powders consist of two drachms of Rochelle Salt and two scruples of carbonate of soda, contained in a blue paper; and half a drachm of powdered tartaric acid, in a white paper. They are taken dissolved in a large tumbler of water, while the liquid is in a state of effervescence. They form an agreeable and mild aperient.

### ROCHE'S EMBROCATION.

An empirical remedy, recommended in whooping cough. Mr. Brande thinks it is composed of—

Oil of Amber . . . . .	$\frac{1}{2}$ ounce.
Oil of Cloves . . . . .	$\frac{1}{2}$ ounce.
Olive Oil . . . . .	1 ounce.

Mix.

The following liniment, rubbed upon the chest two or three times a day, has been also recommended for the disease (See Cochineal). Take of—

Laudanum . . . . .	1 ounce.
Tincture of Camphor . . . . .	1 ounce.
Oil of Amber . . . . .	1 ounce.

Mix. For a liniment.

### ROSE LEAVES

Are astringent, and are used for making the conserve, the infusion, the syrup, and the honey of roses. All these preparations, with the exception of the honey, tend to confine the bowels. The conserve has been much recommended in chronic coughs, in which a gentle tonic and astringent is indicated, and, acidulated with sulphuric acid, in the perspirations connected with general debility of the system. As a gentle astringent, the infusion, acidulated, is a useful gargle in affections of the throat, and as a collyrium in some species of ophthalmia. The infusion of the leaves and the confection are excellent vehicles for the administration of purgative saline salts and sulphate of quinine.

### SAGO

Is the pith of several species of palms and cycadeæ. The best is that known in commerce by the name of Pearl Sago. Sago

affords very little nourishment, and is, therefore, well adapted for invalids labouring under acute diseases. Sago posset Dr. Thomson has found an excellent cordial where acute diseases, not of an inflammatory kind, have left the body in a state of great debility. Put two ounces of Sago in a quart of water, and boil until a mucilage is formed; then rub half an ounce of loaf sugar on the rind of a lemon, and put it, with a teaspoonful of tincture of ginger, into half a pint of sherry wine; add this mixture to the Sago mucilage, and boil the whole for five minutes. A large wineglassful may be taken at intervals of four or five hours. As an article of diet for the sick room, Sago is much inferior to arrow root.

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### SARSAPARILLA.

The virtues of Sarsaparilla have been very differently estimated at different times, but the truth appears to be that, when judiciously administered, it is truly valuable. In the sixteenth century the cure by Sarsaparilla was denominated, by Fallopius, "The royal road to health." He did not then stand alone in his opinion—but, nevertheless, the medicine fell into disrepute, and was not again brought into notice until the middle of the last century, when Dr. William Hunter and Dr. Fordyce restored it to favour. Dr. Christison considers it a fashionable remedy, and almost an inert one. Mr. Lawrence, on the contrary, thinks there is no medicine in the whole *Materia Medica* comparable to it. There is, indeed, no subject which has given rise to more discrepant opinions among practitioners than the therapeutic actions of Sarsaparilla. It certainly, however, possesses the power of improving the general state of the system, and restoring the vigour of the constitution when broken down by long-protracted disease. That these beneficial effects result from the use of Sarsaparilla, Dr. A. Thomson says his experience has fully demonstrated. In whatever form Sarsaparilla is administered, it is necessary to give it in large doses—a pint, for instance, of the decoction should be taken in the course of the day, and continued for many weeks. To insure success, great attention is necessary to the quality of the Sarsaparilla, and to its preparation. A neglect of this is the chief cause of the opinion of its inefficacy. The Concentrated Essence is the most convenient and portable form for its administration, and, from the nicety and caution observed in evaporating, it will rarely disappoint the hopes of the invalid.

## SAVINE OINTMENT.

In maintaining what is called a perpetual blister, Savine Ointment is the irritating substance most commonly employed. In dressing a blistered surface with this Ointment, the film which forms must always be removed, otherwise the part dries and heals. This is most easily done by a hot fomentation or a poultice, which should be left on for six hours; and, as the film is thus loosened, it must be cleared off before another dressing is applied.

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## SCAMMONY

Enters into several of the compound purgatives of the Pharmacopœia, and there is, for example, none better fitted for general use than the compound colocynth pill, the greater part of which is Scammony. It is a good auxiliary to calomel, especially for cleansing the bowels of children when loaded with viscid mucus. For this purpose the old basilic powder, composed of equal parts of Scammony, calomel, and jalap, is an effective mixture. For children who are subject to worms, this powder, too, is sometimes very beneficial, in doses of from five to ten grains, according to the age of the child, given every third morning, taking care that the child drinks nothing cold during its operation.

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## SENEKA ROOT

Has been much used in this country as a powerful diuretic and expectorant, in doses of ten to thirty or forty grains in powder; and in larger doses it is said to produce vomiting and purging. Two or three tablespoonfuls of the decoction, prepared by boiling an ounce of the root in a pint and a half of water till it is reduced to a pint, are given for the relief of asthma, chronic cough, dropsy, and gout. Dr. Chapman states that it is a most active and certain emmenagogue.

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## SENNA

Possesses but one action—that of a purgative, in which respect it is so certain, so manageable, and so convenient, that few remedies of its class are held in equal estimation. It is adapted for



all cases requiring an effectual cathartic. Where the bowels are loaded, a preliminary dose of calomel and compound extract of colocynth, taken over night, and the ordinary black draught, prepared as follows, the succeeding morning, generally proves effectual :—

#### BLACK DRAUGHT.

Epsom Salts . . . . .	$\frac{1}{2}$ ounce.
Infusion of Senna . . . . .	$1\frac{1}{2}$ ounce.
Tincture of Senna . . . . .	1 drachm.
Syrup of Ginger . . . . .	1 drachm.
Spirit of Salvolatile . . . . .	$\frac{1}{2}$ drachm.

Mix—for a dose.

The Infusion of Senna is best made by infusing half an ounce of Senna Leaves in half a pint of tepid water, straining, and adding to it one ounce of camphor mixture. Prepared in this manner the griping property of the infusion is evaded. Three tablespoonfuls of this infusion, with a teaspoonful of Epsom salts, is a good purgative for a boy under ten years of age. Saecharine substances are, too, good correctives of the nauseous taste and tendency of Senna to cause sickness and severe griping. This is well shown in the Sweet Extract of Senna, which is a concentrated syrup, and has scarcely the least taste of Senna, and is very effectual.

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#### SILVER, NITRATE OF,

Is employed chiefly as a caustic to destroy warts, corns, and to repress exuberant granulations. When a Solution of Nitrate of Silver, or the wine of opium, or any other fluid, is ordered to be dropped into the eye, the liquid should be taken up with a quill, open at both ends; one end of the quill should be dipped into the liquid, and the fore-finger be placed on the other end, so as to enable the liquid to be lifted and retained in the quill. The eyelids should next be opened, and the fluid projected between them, by removing the finger from the end of the quill; the patient should then remain quiet, with the eyelids closed, for half an hour.

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#### SODA, BICARBONATE OF,

In the various forms of dyspepsia, attended by secretion of acid and vomiting, no remedy is employed so frequently as the Bicar-



bonate of Soda. It is less unpleasant than potash, and seems, in many cases, to agree better with the stomach. From ten to thirty grains may be taken, with three tablespoonfuls of infusion of colomba, in cases of acidity of the stomach, flatulency, and other dyspeptic symptoms. As a lithontriptic, in cases of uric gravel, it may be given in doses of from ten to forty grains, dissolved in water; its taste is less nauseous than the carbonate of potash, and hence is in more general use in dyspepsia and acidities in the stomach. It has been given on the continent for the cure of bronchocele, and Mr. Peschier considers it much more efficacious than iodine. Twenty grains of carbonate of soda, taken the last thing on going to bed, will frequently procure sleep, when all sedatives have failed. This generally occurs when the patient is suffering from a superabundance of acid on the stomach. A few grains of carbonate of soda, added to a small portion of Peruvian bark and Virginia snake-root, have been given as an effectual remedy in ague and fever. In doses of from ten grains to one drachm it has been highly recommended in whooping-cough; and, in still larger doses, as a remedy for tic douloureux. The following antacid stomachic powder is taken with advantage at bedtime, to prevent the ill effects of too much meat and drink upon a gouty or dyspeptic habit. Take of—

Carbonate of Soda . . . . .	10 grains.
Carbonate of Magnesia . . . . .	10 grains.
Powder of Chamomile . . . . .	10 grains.
Mix.	

The Soda Powders, sold as a substitute for Soda Water, consist of Sesquicarbonate of Soda and tartaric acid, about thirty grains of each being usually put up in separate papers, and mixed in a half-pint tumbler of water. This is a pleasant effervescing draught, slightly aperient from the Tartrate of Soda formed. Soda Powders cannot, therefore, be adequately substituted for Soda Water where the object is to neutralize free acid in the stomach.

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## SODA, MURIATE.

### (COMMON SALT.)

According to physiologists, salt is an important ingredient in the blood; it probably acts as a stimulant to the alimentary canal, and assists the digestive juices. Salt is considered particularly necessary as a condiment to extremely fat meat.

Rickety children sometimes show a remarkable fondness for common salt, which should be indulged to a reasonable extent. Sufficient salt should always be put in the broths, and given with the animal food allowed to children, as it contributes much to the healthy performance of digestion, and is also a powerful preventive of intestinal worms.

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### SODA, PHOSPHATE,

Is a very gentle purgative, frequently used in France, on account of its taste being less unpleasant than the other purgative salts; it is well calculated for children, as it may be given in broth without being detected. It operates in doses of from six drachms to two ounces.

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### SODA, SUBCARBONATE.

(SAL SODA.)

The medical uses of this preparation of Soda are the same as those of the subcarbonate of potash (salt of wormwood), but it is more frequently exhibited, because it is not so caustic. It is preferred to the latter in cases of acidity of the stomach, in dropsies, scrofulous diseases, and whooping-cough. In small doses, and diluted with water, it proves a diuretic.

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### SOLUTIONS OF ACETATE, MURIATE, AND SULPHATE OF MORPHIA.

These preparations, which are usually made by dissolving one grain of the salt in an ounce of water, exert a very powerful narcotic influence on the system, without acting at the same time as a stimulant, like opium. They are therefore preferable, in most instances, to opium or its preparations. The dose of either is from six to twenty-four drops. They are considered to be double the strength of laudanum. The difficulty of obtaining the salts of morphia of a uniform strength has been generally admitted, and the compound solutions form perhaps the most certain and unquestionably the most unobjectionable mode of administering opium. The active principle of the narcotic separated from any

foreign or injurious substances with which they may have been associated, and combined with an agreeable aromatic, has been found to allay pain, remove spasm, and procure sleep, when all other means have proved inefficacious. They have also the advantage of preserving their strength unimpaired, and not being subject to decomposition.

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### SPIRIT OF TURPENTINE.

In large doses this spirit acts as a purgative; and in small doses as a diuretic. It has been used with advantage, in the dose of ten drops to one drachm, in lumbago. Ten or fifteen drops are frequently given as a stimulating diuretic, and is prescribed in gleet and other similar cases in which copaiba is used. Twenty or thirty drops, taken two or three times a day in a little water, are an effective stimulant in chronic rheumatism. A mixture of ten drops with one ounce of almond oil, introduced upon cotton into the ear, is serviceable in cases of deafness from a diseased action of the ceruminous glands. For removing tape-worm from the bowels, spirit of turpentine is given in doses of from half an ounce to two ounces, repeated night and morning till the bowels are evacuated, and the worm dislodged; and should the second dose not operate, some castor oil should be given to aid its purgative powers. The late Dr. Walker, of Leeds, most successfully used spirit of turpentine combined with tincture of gentian in cases of tape-worm, giving two or three teaspoonfuls every eight hours in a draught of the infusion of tansy; and every fourth morning an ounce of the flower of sulphur in a glass of milk. Dr. Copland strongly recommends turpentine in violent attacks of cholera morbus, and in various states of low and malignant fevers, both internally and as an external application in the form of warm epithems. Externally, spirit of turpentine is also applied to indolent tumours; to bruises, sprains, and chilblain, after the inflammatory action has subsided.

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### SPIRIT OF WINE, RECTIFIED,

Is one of the most energetic diffusible stimulants, both in its combined and uncombined state. It is seldom employed alone; but in the state of brandy, &c., it is often used as a table drink, rubefacient, and diluted with water, as a tonic, astringent, and

refrigerant, under various circumstances. Every country has its peculiar spirituous liquor. Brandy, or *eau de vie*, is the spirit of France, which is made chiefly from wine. It is a mixture of various proportions of alcohol and water, flavoured by a volatile oil contained in the skin of the grape. It is not naturally coloured, but receives its brownish orange hue from burnt sugar. Geneva, or Hollands, is distilled from fermented malted barley, and flavoured with juniper-berries. This spirit was formerly kept in the apothecaries' shops, and sold as a diuretic; but, as the common people drank it with avidity, it soon became an article of trade. Scotch and Irish whiskeys are modifications of the same spirit, devoid of the juniper oil; and the English gin is also of the same kind of spirit, but of an inferior quality, rectified with the oil of turpentine. Rum is prepared chiefly from fermented uncrystallisable sugar or molasses, and the scum of the boilers used in the manufacture of sugar in the West Indies. Wine, the next combination of alcohol with other vegetable principles, is necessarily of much older origin than spirits, as it must be produced before spirits can be formed. The habitual use of alcoholic liquors, besides the moral degradation which they produce, gives rise to various diseases and organic lesions, the more important to be studied, on account of their frequent occurrence, in consequence of the large quantity consumed of these liquors. Besides occasionally inducing dyspepsia, dropsy, epilepsy, apoplexy, paralysis, and ordinary mania, they produce a peculiar maniacal affection, accompanied by tremors of the limbs, called *delirium tremens*. In a few rare cases, from the excessive and long-continued use of this stimulus, it has produced a decomposition of the body, more or less extensive, as if destroyed by fire.

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### SPIRIT OF LAVENDER.

An elegant and useful antispasmodic and stimulant, in very general use against nervous diseases, lowness of spirits, &c. It is given in doses of from forty to eighty drops, on a piece of sugar. Thirty or forty drops of Spirit of Lavender, with the same quantity of spirit of sal volatile, frequently relieve a nervous headache.

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### SPIRIT OF SAL VOLATILE.

An excellent and agreeable stimulant in fainting, hysteria, and

nervous debility. In all spasmodic affections, Spirit of Sal Volatile is, perhaps, the best stimulant that can be employed. In hysteria and other nervous affections, the diffusible character of the stimulus of Spirit of Sal Volatile renders it a medicine well adapted for such cases *during the paroxysm*, but it can be of very little service in the intervals, although it is often taken. (See Camphor.) Dose from thirty to sixty drops in water.

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### STRYCHNINE.

Is one of the most active poisons. Dr Christison says, "I have killed a dog in two minutes with a sixth of a grain, injected in the form of alcoholic solution into the chest: I have seen a wild boar killed in the same manner, with a third of a grain, in ten minutes; and there is little doubt that half a grain, thrust into a wound, would kill a man in less than a quarter of an hour." Notwithstanding its poisonous qualities, it is used in medicine, and, whether given in the form of nux vomica, or in its purer form of strychnia, it acts very beneficially in some kinds of paralysis, and in a few other diseases where the nervous system is chiefly affected. The dose of strychnine is one-sixteenth of a grain, made into a pill thus:—

Take of Strychnine, one grain;  
Conserve of roses, half a drachm.

Mix well together, and divide the mass into sixteen pills. One pill may be taken night and morning.

If violent twitchings of the limbs be observed during the exhibition of this medicine, it should be immediately discontinued. *It should never be given without the advice of a physician.*

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### SUGAR OF LEAD

Should never be administered internally without the authority of the medical practitioner; but, as an external application, it is beneficial in many cutaneous eruptions, attended with surrounding inflammation, or accompanied by itching and heat. "For erysipelas," says Dr. Christison, "its best form, and one of the best applications, is a lotion, consisting of four grains each of Acetate of Lead and opium to every ounce of water." (See Goulard's Extract.)

## SULPHUR,

In combination with magnesia, in doses of from twelve to fifteen grains of each, taken at bedtime, daily, affords great relief in piles. When Sulphur is taken alone for some time, it excites fever, on which account its use should be occasionally intermitted, and a saline purgative administered.

## SWEET SPIRIT OF NITRE.

Its most important property is that of exciting the kidneys to increase their secretion. It is a pleasant and favourite diaphoretic, quenching thirst, relieving languor and feverishness. Half a drachm to a drachm is the usual dose. The following often allays the troublesome tickling sensation in the throat, which attends a common catarrh. Take of—

Oxymel . . . . .	1 ounce.
Syrup of Poppies . . . . .	$\frac{1}{2}$ ounce.
Sweet Spirit of Nitre . . . . .	$\frac{1}{2}$ ounce.

Dose—one teaspoonful, to be taken frequently.

## TAMARINDS.

The pulp of Tamarinds is mildly laxative, but though well adapted for mild febrile or inflammatory affections, occurring in children, it is rarely employed. Tamarind Whey is prepared by boiling an ounce of Tamarinds with a pint of new milk, and straining. It is an excellent cooling gentle laxative in febrile diseases.

## TAPIOCA

Is the pith of the roots of *Janipha Manihot*, a native plant of Brazil. It resembles sago, but it is less coloured, and in larger grains. To make Tapioca into a proper mucilage for the sick, an ounce of it should be macerated in a pint of water, in a basin placed on the hob, or on a hot plate for one hour, and then boil for ten minutes, stirring assiduously during the boiling. The mucilage may be sweetened with sugar, or flavoured with lemon

juice, or milk whey may be added to it, according to circumstances.

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### TARTAR EMETIC.

Too much circumspection cannot be insisted upon in reference to the internal use of this powerful remedy. As an external application, Emetic Tartar is occasionally employed in the form of ointment, as a means of producing irritation and a pustular eruption upon the skin, which it does very effectually. The application of Tartar Emetic to the region of the stomach has been recommended in hooping cough, but, independent of the painful and often troublesome consequences, such treatment, more especially of children, should be adopted with much caution.

One grain of tartar emetic mixed with ten or fifteen grains of ipecacuanha, is a certain emetic. At the commencement of many febrile diseases, such as small-pox, hooping cough, measles, and foulness of the stomach, it generally proves more successful than ipecacuanha; but, in fevers attended with debility, ipecacuanha should be preferred. For children, Emetic Tartar is not so safe an emetic as ipecacuanha powder. In minute doses, and combined with calomel, Tartar Emetic has been found a powerful yet safe alterative in obstinate eruptions of the skin. Mixed in the proportion of a drachm and a half, or two drachms, with one ounce of lard, it is also occasionally employed externally, as a means of producing irritation and a pustular eruption upon the skin, and is used against rheumatic pains, white and other obstinate swellings, and various internal diseases.

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### TINCTURE OF MURIATE OF IRON

Is a definite and highly active chalybeate, and may generally be used as a substitute for the other preparations of iron. It may be taken as a tonic, in doses of five to twenty drops, twice a day, in a little water. In dyspepsia it should be taken in doses of five drops, in two tablespoonfuls of infusion of quassia, morning and noon. Like other chalybeates, it is apt, in large doses, to produce headache, harden the pulse, and constipate. A teaspoonful of Epsom salts may then be added to each draught. If it produce diarrhœa, the bowels should be cleared with a little rhubarb and magnesia, and it may then be generally resumed without ill effect.



As a tonic after diseases of debility, it requires, as well as the other preparations of iron, considerable circumspection in its use. (See Iron.)

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### TOUS LES MOIS.

A fecula, obtained from the root of the *canna coccinea*, a native of the Island of St. Kitts. It is used in the same manner as arrow root, over which it possesses the only advantage of being rather cheaper.

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### TINCTURE OF ALOES.

This preparation possesses stomachic and purgative qualities, but should never be given where there is a tendency to piles. The dose is from four drachms to one ounce.

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### TINCTURE OF ALOES, COMPOUND,

Is a more stimulating compound than the above. The dose is from half a drachm to two drachms. It is frequently given as an emmenagogue, and in the obstinate constipation of elderly women.

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### TINCTURE OF ALOES AND MYRRH

Is used chiefly as a laxative, tonic, and emmenagogue, in green sickness and other disordered states of health in females, connected with retained, suppressed, or deficient menstruation, and with constipated bowels. It is sometimes called *Elixir proprietatis*. The dose is one or two drachms in water.

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### TINCTURE OF ALOES, ETHEREAL.

This differs from the preceding tincture only in containing ether, which adapts it to the treatment of cases complicated with spasm or irregular nervous action. The dose is the same as the above.

### TINCTURE OF ASSAFŒTIDA

Is given in the same cases as assafœtida, in doses of one drachm or more. It is sometimes added to a purgative injection, in teaspoonful doses, to relieve spasm or flatulence.

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### TINCTURE OF BALSAM OF TOLU

Is sometimes used for relieving obstinate coughs, attended by difficult expectoration, when no inflammatory symptoms are present. The dose is from twenty to sixty drops in a little barley-water, honey, or mucilage of gum Arabic.

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### TINCTURE OF BARK.

The dose is from one drachm to one ounce.

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### TINCTURE OF BARK, COMPOUND (HUXHAM'S.)

This tincture has long been in great repute, as one of the best preparations of bark; but its use has been much supplanted by the introduction of quinine. The dose is from one to three drachms. It is a grateful stomachic in dyspepsia.

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### TINCTURE OF BUCHU LEAVES

Is given in doses of from one drachm to half an ounce, in decoction of marsh-mallow, for urinary irritation, gravel, spasmodic stricture, gleet, fluor albus, &c., and is considered a valuable remedy for the above diseases.

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### TINCTURE OF COLOMBA

Is a good stomachic, in the dose of three or four drachms in a wineglassful of water.

## TINCTURE OF CAPSICUM

Is a good stimulant, in doses of half a drachm or more, in low typhus, gangrene, &c. A mixture of two drachms with half a pint of barley or rose water, and six grains of sulphate of zinc, or of sulphate of alumina, will answer all the purposes of the Cayenne gargle, which is much used for relaxed sore-throats.

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## TINCTURE OF CARDAMOMS

Is a powerful stimulating carminative. In spasm of the stomach, an ounce, with some other diluted stimulant, or any carminative water, is given with advantage. The dose may vary, according to circumstances, from half a drachm to an ounce and upwards.

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## TINCTURE OF CARDAMOMS (COMPOUND)

Is also a useful and elegant carminative and cordial. It may be given in the same doses as the above.

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## TINCTURE OF CASCARILLA

Is a stimulating aromatic tonic, which may be exhibited in debility of the bowels and stomach, and in those cases of fever in which the Peruvian bark proves purgative. The dose is from half a drachm to two drachms.

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## TINCTURE OF CASTOR.

A powerful stimulant and antispasmodic, mostly exhibited in hysterical affections in a dilute form. The dose is from half a drachm to two drachms.

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## TINCTURE OF CATECHU

Is an aromatic astringent, generally given in protracted diar-

rhœa. The dose is from a teaspoonful to a tablespoonful, usually combined with chalk mixture.

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### TINCTURE OF CUBEBS.

Dose, one or two tea-spoonfuls three or four times a day, in barley-water. The following mixture is sometimes very beneficial in diseases of the bladder, and of the urinary passages, and in gonorrhœa and gleet:—

Take of Oil of Almonds, one ounce.

Mucilage of Gum Arabic, one ounce and a half.

Mix, and add by degrees,

Distilled Water, three ounces.

Tincture of Cubebs, one ounce.

Spirit of Nitre, half an ounce.

Syrup of Poppies, one ounce.

Mix, and take three table-spoonfuls three times a day.

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### TINCTURE OF FOXGLOVE

Is frequently administered as an anodyne in palpitations, spitting of blood, asthma, nervous coughs, and in the last stage of consumption. In dropsy, benefit has been obtained from its powerful diuretic action. The dose is from five drops, gradually and cautiously increased to thirty. From the great care required in administering this tincture, it should only be given under the direction of a physician. To obtain a diuretic effect, the infusion of digitalis is the most certain preparation.

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### TINCTURE OF GENTIAN

Is an excellent stomacheic, bitter and cordial, and is usually taken for debility of the stomach and loss of appetite. The dose is from one to three drachms, in plain water, or camphor julep.

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### TINCTURE OF GUAIACUM, VOLATILE,

Is a valuable sudorific in chronic rheumatism. It may be given

at bedtime, in doses of one or two drachms, triturated with mucilage, honey, or milk; and followed by warm drinks, such as ginger-tea, decoction of bark, &c.

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### TINCTURE OF JALAP

Is given in doses of from one drachm to half an ounce as a cathartic, and is frequently taken in conjunction with the infusion of senna and Epsom salts, to increase their activity.

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### TINCTURE OF KINO

Is administered in diarrhœa, the latter stage of dysentery, fluor albus, and in all cases in which astringents are indicated. The dose is from one to two drachms, generally combined with the chalk mixture.

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### TINCTURE OF MYRRH

Is chiefly used externally as an application to ulcers that require to be stimulated; also as a wash for the mouth when the gums are spongy. Combined with tincture of bark, infusion of roses, and acids, it forms an excellent gargle in putrid sore-throat, and in the last stage of thrush. The odoriferous tincture of myrrh is an agreeable and excellent application for these purposes.

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### TINCTURE OF RHATANY.

Rhatany-root has long been employed by the Peruvians as an astringent in dysentery; they also use it as a tooth-brush, to give firmness to the gums, and impart a fine red to their lips. In combination with charcoal, in the proportion of one part to three of the charcoal, it forms an excellent tooth-powder. The tincture of rhatany has long been recommended, mixed with an equal quantity of rose-water, as an astringent wash for the gums.

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### TINCTURE OF RHUBARB

Is an excellent remedy in cases of flatulent affections of the

bowels attended with griping pains, and in diarrhœa free from inflammation; but it should not be indiscriminately administered in every case of pain in the bowels, on account of the stimulating nature of the spirit with which it is prepared. The dose may vary from four to eight drachms, mixed with peppermint-water, according to circumstances. Two teaspoonfuls of this tincture, taken an hour before dinner daily, frequently give energy to the stomach, and promote digestion.

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### TINCTURE OF SENNA.

Carminative and aperient, in doses of from two to eight drachms.

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### TINCTURE OF VALERIAN, AMMONIATED.

In doses of from one to two drachms, mixed with milk, camphor julep, or ethereal preparations, it is an excellent stimulant and antispasmodic, and advantageously combined with preparations of iron in cases of chorea, or St. Vitus's dance.

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### TOBACCO.

The history of this plant, which was brought into fashion in England by Sir W. Raleigh, is very interesting. It is the indigenous production of a little spot, the Island of Tobago. It has engaged the attention of the sordid, and enchanted the wise. Everywhere its powers are felt and its fascinations acknowledged. The Arab cultivates it in his burning deserts. The Laplander risks his life, amidst the snows, to procure it. No privation is too severe to the seaman or the soldier while he commands this luxury. Even polished man, with all the comforts of elegant society, often cannot dispense with his snuff or his cigar. The use of this plant produces very different effects on different constitutions; some get readily habituated to it, while others suffer nausea, vertigo, vomiting, and general depression from it. Smoking it to excess discolours the teeth, destroys the tone of the stomach, causes general emaciation, and has been known to impair the mental faculties. It is particularly injurious to lean, hectic, and hypochondriacal persons; it creates an unnatural thirst; leads to the use of spirituous liquors; increases indolence; confirms the lazy in the habits

they have acquired; and, above all, it is pernicious to youth, laying the foundation of future misery. At the same time there is reason to believe that it is not injurious to seamen, soldiers, and others who live in cold and moist climates, take great exercise, or are much in the open air.

Tobaceo is used medicinally as an errhine, in the form of snuff; as a sedative and expectorant, in the form of smoke; and as an antispasmodic, stimulant, and sedative, in the form of infusion. A decoction of the leaves is much esteemed as an external application in some diseases of the skin, particularly the itch. The fumes and the decoction are employed by injection in obstinate constipations of the bowels, and frequently with success; it is necessary, however, to be cautious against an effect sometimes produced by its exhibition, namely, fainting, with cold sweats. Its incautious and inappropriate use has even occasioned death. Its relaxing powers have frequently obviated the necessity of an operation in strangulated hernia, and Mr. Pettigrew retarded the fatal progress of hydrophobia by its use in the form of enemata.

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### TURNER'S CERATE

Is generally employed for dressing broken chilblains, burns, and scalds.

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### UVA URSI.

The leaves of this plant are astringent and tonic. They are used in chronic inflammation of the mucous membrane of the bladder, in calculous and nephritic disorders, and in various fluxes. The dose of the powdered leaves is from one scruple to one drachm, three or four times a day. The infusion, made by pouring half a pint of boiling water upon two drachms of the leaves, and allowing it to macerate for three hours, may also be given in doses of from one to two ounces three times a day.

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### VALERIAN ROOT

Is in very general use as an antispasmodic, and is given in convulsive and hysterical diseases. The dose of the powdered root is from one scruple to one drachm two or three times a day. The infu-



sion, made by pouring a pint of boiling water upon half an ounce of the root, and mixed with compound spirit of lavender and the ammoniated tincture of Valerian, is given with advantage in hysterical and other nervous affections, when the stomach cannot bear the powder.

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### VANILLA.

The plant yielding the Vanilla spice of commerce is a creeping shrub of the orchis tribe, growing on the mountains of Mexico and Peru, and in the warm parts of America, cultivated by the natives of those regions, who affect a profound secrecy respecting their mode of management in its culture. As sold in the shops, Vanilla is a shrivelled pod of the kidney-bean shape, about six inches long, with long wrinkled ridges on its outer surface; feels oily, and rather adhesive to the fingers; has a balsamic odour, a black colour, is slightly tough in fracture, and when eaten has the taste in substance of prunes, with the flavour of burning pastiles. Its chief use consists in giving a delicate balsamic flavour to various kinds of confectionary, as ices, sauces, creams, and particularly in being employed, in small quantities, as an adjunct to chocolate. It is, moreover, a powerful aid to the perfumer, the odour of the substance being one of the most exquisite imaginable.

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### VINEGAR

Is not without reason regarded as possessing some chemical influence in decomposing infectious and contagious matters; and, consequently, it is almost invariably sprinkled over the floor of the rooms of those suffering under infectious diseases; or the vapour of hot vinegar is diffused through their apartments. It is a still more powerful disinfectant when it holds camphor and aromatic oils in solution: hence the great popularity of the preparations called Aromatic Vinegar, and Thieves' Vinegar: the repute of the latter is founded upon a story—that four thieves, who plundered the dead bodies during the plague at Marseilles, with perfect security, on being questioned respecting the cause of this impunity, confessed, on the condition of their lives being spared, that they attributed it solely to the use of this Vinegar. Thieves' Vinegar is less pungent than Aromatic Vinegar. The following is a convenient way of preparing it, for overpowering the unpleasant odours of a sick room. Take of—

Tops of Rosemary, dried . . . . .	1 ounce.
Sage Leaves, dried . . . . .	1 ounce.
Lavender Flowers, dried . . . . .	$\frac{1}{2}$ ounce.
Cloves, bruised . . . . .	$\frac{1}{2}$ drachm.
Boiling Water . . . . .	$\frac{1}{2}$ pint.
Acetic Acid . . . . .	1 pint.

Add the acid after the other ingredients have infused in the water an hour. In this state of combination Vinegar is extremely agreeable and refreshing, both to the invalid and the attendants of the sick room. The benefit which it produces depends upon a certain degree of stimulus imparted to the sensitive nerves, which are generally in a low condition in an infectious atmosphere; but, as a chemical agent, it is feared its powers are too feeble to be followed by permanent benefit.

### VINEGAR OF CANTHARIDES

Is useful as a ready, almost instantaneous mode of making a blister. It only requires a piece of blotting paper, or a piece of lint, to be soaked in the Vinegar and laid upon the part to be blistered. This method of making a blister is extremely serviceable in cases of sudden cramp of the stomach, and in tooth-ache—in this latter instance it should be applied behind the ears. In all cases of deep-seated internal pains it may be employed.

### WARNER'S GOUT CORDIAL

Is a gentle purgative, usually very acceptable to the stomach, and well adapted to eases of costiveness, with gastric uneasiness, in persons of a gouty habit, and accustomed to the free use of wine or other stimulating drink. The dose is four or five tablespoonfuls, with an equal quantity of hot water; should this produce sickness, five or ten drops of laudanum may be added.

### WINE, ANTIMONIAL

Is a diaphoretic or emetic, according to the extent of the dose. In doses of ten drops to one drachm, in any proper vehicle, repeated every three or four hours, it usually excites diaphoresis; but it is principally used as an emetic for children, a half teaspoonful being given every five or ten minutes until vomiting is excited, but is not so safe as Ipecac. (*See Antimonial Wine.*)

## WINE OF COLCHICUM ROOT

Is administered with great advantage in inflammatory and painful nervous affections, such as gout and acute rheumatism; diminishing the force and frequency of the pulse, allaying the pain, and cutting short the paroxysm. The usual dose of colchicum wine is from twenty drops to one drachm; but the quantity administered must be proportioned, of course, to the age and strength of the patient. The following is a good form for its administration:—

Take of	R
Colchicum wine, half a drachm.	Vin. rad. colchici ℥ss.
Carbonate of magnesia, one scruple.	Magnesiae carbon. ℥j.
Mint water, twelve drachms.	Aquæ menthæ ℥xij.

Mix and make a draught, which may be taken when the paroxysms of pain are violent, or at bedtime.

## WINE OF COLCHICUM SEEDS.

This preparation possesses the same medicinal properties as the root, and is administered under similar circumstances.

## WINE OF IPECACUANHA.

This preparation is often used as an emetic, especially for infants, to whom it can be given with safety and without difficulty, in doses of twenty drops, half a tea-spoonful, or a tea-spoonful, and repeated every quarter of an hour, until vomiting is produced. After a year old, these doses may be doubled, and repeated at shorter intervals. Ipecacuanha wine is a very certain as well as mild emetic, and will occasionally produce vomiting when antimonial wine has failed. The following is a good general formula for its administration:—

## EMETIC MIXTURE.

Take of	R
Distilled water, one ounce.	Aquæ destillatæ 3j.
Ipecacuanha wine, half an ounce.	Vini ipecacuanhæ ℥ss.
Simple syrup, half an ounce.	Syrupi simplicis ℥ss.
Mix.	Misce.

Dose—from one to two drachms. The dose of ipecacuanha wine as an emetic for an adult is an ounce; as an expectorant and diaphoretic, from ten to thirty minims.

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### WINE OF OPIUM.

This preparation is of nearly the same strength as laudanum, and is given under similar circumstances. The wine of opium has been applied to the eye in cases where, after active inflammation has been subdued, the vessels remain turgid; two or three drops of it being introduced under the eyelids.

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### ZINC.

Equal parts of Zinc and elder flower ointment is very useful in sore nipples.

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### ZINC, SULPHATE OF,

Is extensively used as an astringent in chronic ophthalmia. The lotion at first should contain only one or two grains to an ounce of rose water.

This preparation is a powerful emetic. It is not employed in common cases, where emetics are indicated, but is had recourse to, as it operates speedily and with much force, in cases where it is of importance that the contents of the stomach should be immediately evacuated, or where it is difficult to excite vomiting, as where any narcotic poison has been swallowed. Its dose is from five to twenty grains, according to the state of the stomach, and it should be given dissolved in three or four ounces of water. Sulphate of zinc has been employed also as an astringent in chronic dysentery, and in the treatment of whooping-cough; but from its emetic power its operation is liable to be harsh, and is not easily regulated.

Two grains dissolved in one ounce of water are employed as an injection in gonorrhœa when the inflammatory state has subsided, and in gleet; and it frequently succeeds in checking the discharge, apparently from its astringent power. In combination with alum it forms a very styptic liquor, which may be used for stopping hemorrhage and checking increased discharges, externally applied.

## LIST OF MEDICINES, &amp;c.

Medicines.	DOSES.		Proper vehicle, and period of repetition.	Effects, and Diseases in which useful.
	Adults.	Child from 2 to 4 yrs.		
Adhesive Plaster . . . . .	(see page 32) . . . .			
Æther . . . . .	(see page 31) . . . .			
Almond Mixture . . . . .	large wineglass . . .	table-spoonful . . .	every 2 or 3 hours . .	demulcent in cough.
Aloes . . . . .	(see page 33) . . . .			
Alum. . . . .	(see page 34) . . . .	teaspoonful . . . . .	syrup . . . . .	emetic in croup.
Antimonial Powder . . . .	(see page 36) . . . .			
“ Wine . . . . .	(see page 37) . . . .			
Aperient Mixture . . . . .	(see page 20) . . . .			
“ Pills . . . . .	(see page 34) . . . .			
Aromatic Vinegar . . . . .	(see page 107) . . . .			
“ Confection . . . . .	$\frac{1}{2}$ scruple to 1 dr <sup>chm</sup> .	3 to 6 grains . . . .	[times a day cinnam. water, 2 or 3 pills, twice a day . .	cordial & astring. diarrhœa
Balsam of Tolu, Tincture of	30 to 60 drops . . . .		sugar and water. . . .	antispasmodic in hysterics.
Bark, Powder of . . . . .	20 to 60 grains . . . .	6 to 10 grains . . . .	3 or 4 times a day . .	pectorant in chronic cough.
“ Tincture of . . . . .	2 to 4 drachms . . . .	40 to 60 drops . . . .	water, 3 times a day . .	tonic in indiges. & weakness
Basilic Powder . . . . .	20 to 25 grains . . . .	6 to 8 grains . . . .	honey, twice a week . .	relaxation & weakness.
Bicarbonate of Potash . . .	(see page 86) . . . .	5 grains . . . . .		vermifuge.
Blister Plaster . . . . .	(see page 39) . . . .			in acidity of stomach.
Buchu, Tincture of . . . .	2 to 3 tea-spoonfuls .		[day linseed tea, 3 times a	irritation of the bladder.
Calomel . . . . .	1 to 2 grains . . . .	$\frac{1}{2}$ to 1 grain . . . .	pills, twice a day . .	alterative.
Calumbe, Powder of . . . .	10 to 20 grains . . . .	3 to 5 grains . . . .	water, 3 times a day . .	stomachic in indigestion.
Camphor . . . . .	(see page 43) . . . .			
Castor Oil . . . . .	1 to 2 table-spoons .	1 to 2 tea-spoonfuls .	(see page 46) . . . .	purgative.
Carbonate of Soda . . . . .			[day mint water, 4 times a	aststringent.
Chalk, Prepared . . . . .	10 to 15 grains . . . .	4 to 6 grains . . . .		
Citric Acid . . . . .	(see page 26) . . . .			
Colocynth Pill . . . . .	10 to 20 grains . . . .	4 grains . . . . .	occasionally . . . . .	purgative.
Cordial Tincture Rhubarb	(see page 104) . . . .			
Court Plaster . . . . .				[eruptions.
Cream of Tartar . . . . .	1 to 4 drachms . . . .	20 to 30 grains . . .	honey, in the morning	aperient and alterative in

Medicines.	DOSES.		Proper vehicle, and period of repetition.	Effects, and Diseases in which useful.
	Adults.	Child from 2 to 4 yrs.		
Dinner Pills . . . . .	(see page 33) . . . .			
Dover's Powder . . . . .	6 to 12 grains . . . .	3 to 6 grains . . . .		
Electuary, Lenitive . . . .	2 to 3 drachms . . . .	$\frac{1}{2}$ to 1 drachm . . . .		
Elixir of Vitriol . . . . .	10 to 20 drops . . . .	3 to 5 drops . . . .		
Epsom Salts . . . . .	4 to 8 drachms . . . .	1 drachm . . . . .		
Essence of Senna (see Fluid Extract of Senna) . . . .	(see page 92) . . . .			
Essence of Camphor . . . .	(see page 44) . . . .			
Ginger . . . . .	(see page 61) . . . .			
Goulard's Extract . . . . .	(see page 62) . . . .			
Graduated Meas. & Funnel				
Gum Arabic . . . . .	(see page 62) . . . .			
Hiera Piera . . . . .	15 to 20 grains . . . .	4 to 8 grains . . . .	mint water . . . . .	purgative and stomachic.
Healing Ointment . . . . .				
Hoffman's Anodyne . . . .	30 to 40 drops . . . .	6 to 10 drops . . . .	water, twice a day . .	antispasmodic.
Ipecacuanha Powder . . . .	(see page 67) . . . .			
“ Wine . . . . .	(see page 109) . . . .			
Jalap Powder . . . . .	20 to 30 grains . . . .	4 to 6 grains . . . .	mint water . . . . .	purgative.
Kreosote . . . . .	(see page 71) . . . .			
Laudanum . . . . .	(see page 72) . . . .			
Lint . . . . .				
Magnesia . . . . .	20 to 40 grains . . . .	5 to 10 grains . . . .	mint water . . . . .	absorbent.
Mindererus' Spirit . . . .	2 to 4 drachms . . . .	1 to 2 drachms . . . .		sudorific and cooling.
Manna . . . . .	(see page 77) . . . .	1 to 2 drachms . . . .	tea . . [times a day	gently aperient.
Nitre, Powder of . . . . .	5 to 20 grains . . . .	2 to 4 grains . . . .	barley water, 2 or 3	diuretic and febrifuge.
“ Sweet Spirit of . . . .	20 to 60 drops . . . .	6 to 12 drops . . . .	barley water . . . . .	diuretic and febrifuge.
Opodeldoc . . . . .	(see page 83) . . . .			
Opium . . . . .	(see page 81) . . . .			
Paregoric Elixir . . . . .	(see page 83) . . . .			
Pestle and Mortar . . . .				
Plaster Skins . . . . .				
Pill Tile . . . . .				
Poppies, Syrup of . . . . .	1 to 2 tea-spoonfuls		in water . . . . .	anodyne.

Medicines.	DOSES.		Proper vehicle, and period of repetition.	Effects, and diseases in which useful.
	Adults.	Child from 2 to 4 yrs.		
Rhubarb, Powder of . . . .	20 to 30 grains . .	4 to 8 grains . . .	mint water . . . . .	aperient.
Rochelle Salts . . . . .	4 to 8 drachms . .	1 to 2 drachms . .	in water, twice a day	aperient.
Savine Ointment. . . . .	(see page 91) . . .			
Sarsaparilla . . . . .	(see page 90) . . .			
Spermaceti Ointment . . .	10 to 20 grains . .	2 to 4 grains . . .	mint water . . . . .	strong purge in costiveness
Scammony Powder . . . .	30 to 80 drops . .	10 to 20 drops . .	water . . . . .	fainting & lowness of spirits
Spirit of Lavender . . . .	(see page 96) . . .			
“ Sal volatile . . . . .	(see page 43) . . .			
“ “ Camphorated . . . .	(see page 98) . . .			
“ Nitre . . . . .	(see page 96) . . .			
“ Hartshorn . . . . .	2 to 8 grains . . .		3 or 4 times a day . .	tonic in general debility.
Sulphate of Quinine . . . .				
Spatulas . . . . .	(see page 99) . . .			
Syringes, male and female	(see Soda P. p. 93)			
Tartar Emetic . . . . .	10 to 20 drops . .	6 to 8 drops . . .	barley water . . . . .	Incontinence of urine, and in cutaneous eruptions—as an external application the Liniment of Tincture Cantharides and Opodeldoc is very efficacious in relieving rheumatic pains.
Tartaric Acid . . . . .				stomachic in indigestion.
Tincture Cantharides . . .	2 to 3 drachms . .	$\frac{1}{2}$ to 1 drachm. . .	chamomile tea . . . . .	antispasmodic.
“ Cardamoms . . . . .	1 to 2 drachms . .	10 to 20 drops . .	camphor julep . . . .	tonic.
“ Castor . . . . .	1 to 2 drachms . .	12 to 30 drops . .	water, 3 times a day	
“ Gentian . . . . .	(see page 61) . . .			
“ Ginger . . . . .	30 to 60 drops . .	5 to 6 drops . . .	milk, twice a day . . .	sudorific in rheumatism.
“ Guaiacum . . . . .	20 to 60 drops . .	3 to 5 drops . . .	mint water, bed time	anodyne in acute pains.
“ Henbane . . . . .	(see page 68) . . .			
“ Iron, Muriated . . . .	(see page 104) . . .			
“ Rhubarb . . . . .	10 to 40 drops . .	6 to 10 drops . . .	mint water, twice day	expectorant in chronic cough
“ Squills . . . . .	4 to 8 drachms . .	1 to 3 drachms . .	water . . . . .	purgative.
“ Senna . . . . .	40 to 80 drops . .	10 to 15 drops . .	water, 3 times a day	[of spirits.
“ Valerian, Volatile . . .				nervous headache & lowness



## DOMESTIC MEDICINE.

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THE chief object of this department is to assist unprofessional persons to distinguish such diseases as are dangerous in their nature, and rapid in their progress. For these the advice of the ablest physicians or surgeons should be procured without delay. In cases of emergency, it may likewise serve as a guide to persons who, on any sudden or violent attack of illness, either in their own families, or in those of the neighbouring poor, may find it necessary to administer some appropriate remedy until they obtain professional assistance.

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### AGUE, OR INTERMITTENT FEVER.

This disease consists of paroxysms or periods of fever, between each of which there is a perfect intermission or period without fever.

The febrile paroxysm of an ague consists of three periods or stages—the cold, the hot, and the sweating stage; and these occur in regular succession.

The cold stage commences with languor, a sense of debility, restlessness, yawning, and an aversion to motion; the face and extremities become pale, the features shrink, &c. At length the patient himself feels a sensation of cold, first arising in the back, and thence diffusing itself over different parts of the body. This is followed by rigors or shiverings, which terminate in a universal and convulsive shaking, which, in an hour or two, is gradually succeeded by a degree of heat over the whole body, redness of the face, dryness of the skin, thirst, a quick pulse, pain in the head, and sometimes delirium, if the attack be very severe. This

is the second or hot stage. In from one to three hours, a sweat breaks out, and becomes general. As it continues to flow, the heat of the body abates, the thirst ceases, and most of the functions are restored to their ordinary state. This constitutes the third stage. When the paroxysm of this fever returns every day, it is called *quotidian* ague; when every other day, *tertian*; and *quartan* when it returns every fourth day. It is also called *autumnal ague* when it occurs in autumn, and *vernal*, when in the spring.

*Treatment.*—During the *cold stage* endeavour to bring on the hot, by giving warm diluent drinks and cordial diaphoretic draughts, by bathing the feet in warm water, or by the warm bath, and fomentations to the feet. Should this stage prove extremely severe, recourse must be had to a warm bath, or to an emetic, if the latter has not been administered, as it frequently is, before the commencement of the paroxysm.

During the *hot stage*, cold acidulated liquids, and the remedies recommended during the cold stage, are generally beneficial. Should there be in the hot stage a congestion of blood in the external vessels of the head, or delirium, cupping from the temples, or leeches, are to be applied, and opiates avoided.

During the intermissions, the bowels should be gently moved by a mild bitter cathartic draught;\* the bark, in substance, should then be given to as great an extent as the stomach will bear; and where there is great debility, it should be combined with wine and aromatics, with a generous but light diet, and moderate exercise. One ounce of bark, mixed up with port wine, will generally prevent the recurrence of the fit, if the whole of this quantity be taken in the six hours before the fit is expected. If the stomach will not bear this form and quantity of bark, the sulphate of quinine, or compound tincture of bark may be administered, as directed under those names in the *Materia Medica*.

Marsh miasmata, or the effluvia arising from stagnant water, or marshy ground, when acted upon by heat, are the most frequent causes of this fever. Persons exposed to a climate in which ague prevails endemically, may most effectually preserve themselves

\* Take of  
 Infusion of gentian,  
 Infusion of senna, of each six  
 drachms.  
 Tartrate of potash, a drachm and a  
 half.  
 Syrup of rhubarb, one drachm.  
 Mix.

R  
 Infusi gentianæ,  
 Infusi sennæ, aa ʒvj.  
 Potassæ tartratis ʒiss.  
 Syrupi rhei ʒj.  
 Misce.

from its attack by care in avoiding sudden changes of temperature, and the night and morning air, by conforming their dress to the varying state of the weather, and by the constant use of flannel clothing. Keeping out at sea in foggy weather, and passing the night in places which are regarded as sources of miasma, are also to be carefully avoided.

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### APOPLEXY.

The mode of attack of apoplexy is subject to great variation. Sometimes it is sudden and unexpected; the patient, uttering perhaps an exclamation of some unusual or painful feeling in the head, drops down insensible without previous complaint. In general, however, the approach of the disease is indicated by certain premonitory signs, with which it is desirable that every one should make himself acquainted. These signs consist, for the most part, of some imperfection or disorder in one or other of the sensorial functions; such as imperfect or irregular vision, deafness, numbness, impaired memory, and unusual disposition to sleep; in some cases, violent and long-continued or frequently repeated headaches, precede the attack of apoplexy. The short-necked, the indolent, and such as are apt to indulge in full meals of animal food, and the free use of spirituous and vinous liquors, are generally its victims.\* Apoplexy may be brought on by whatever hurries the circulation, so as to increase the afflux of blood into the vessels of the head. It may likewise be occasioned by whatever impedes the free return of blood from the head, as a tight ligature or handkerchief round the neck.

*Treatment.*—The patient should be carried into a well-ventilated and spacious apartment, and placed with his head and shoulders very considerably raised, or in a sitting or semi-recumbent posture, with everything removed from his neck. Directions should be given to have hot water in readiness. The next object should be to bleed freely, or sparingly, according to the age and habit of the patient, either from the jugular vein, or the vein of an arm; and, if the patient is able to swallow, the most active purgatives should be administered, and repeated frequently: if not, a drop or two of Croton oil may be introduced into the mouth, which, in the course of an hour, generally produces fecal evacuations. While

\* It is said that butchers, although so much exposed to the open air, rarely die of consumption; but that many of them die, at an early period of life, of apoplexy, from an over-proportion of animal diet.

we are waiting the operation of the purgative, it will be advisable, particularly when there is much heat of the head, to plunge the feet and legs in warm water, and apply ice to the head. The physician's aid should be had as soon as possible, as this disease is attended with very great danger.

*The mode of letting blood in this and other diseases.*—Bind up the arm (the right will be most convenient) with a piece of ribbon, or broad tape, about four inches above the elbow-joint, sufficiently tight to make the vein swell; then place the index finger of the right hand on the vein, and avoid opening that where a pulsation is felt. Under all circumstances, the safest plan will be to open one running on the outer side of the arm. Having selected the vein, you must prevent it rolling about by making pressure on it by the left-hand thumb, and taking the lancet between the finger and thumb of the right hand, and holding it in a slanting direction, you must make a free incision into the vein; this done, if the blood does not flow freely, you may direct the patient to open and shut his hand smartly, or you may put into his hand a walking-stick, and direct him to move it about. Having taken a sufficient quantity of blood away, the bandage is to be untied, and a compress of lint having been placed over the lips of the wound, the arm is to be bound up by making the bandage describe the figure of 8, by carrying it above and below the elbow. Should it be necessary to take any more blood in the course of a day or two, a second incision will not be required, as the original opening will bleed freely by binding up the arm as in the first instance.

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## ASTHMA.

This disease is characterized by a difficulty of breathing, returning at intervals, attended by a sense of constriction across the breast and in the lungs, with a wheezing cough and expectoration.

In the *treatment* of asthma we should endeavour to moderate the violence of the paroxysm by placing the patient in an upright posture, and loosening his dress, so as to render the action of the chest as free as possible: then by inhaling the vapour of the decoction of stramonium, or of the hop, from the spout of a common tea-pot, or Read's improved inhaler. The smoking\* of

\* The mere mechanical act of smoking even an empty pipe has been known to relieve the muscles of respiration, and thereby allay an attack of asthma. The stramonium cigar will, however, be found the most convenient and useful means.

stramonium sometimes allays the local morbid excitement; and the caloric, which is taken with it during its operation, powerfully promotes the secretion of mucus, and speedily terminates the fit. When this herb is employed with a view of preventing or palliating the paroxysm, the patient should begin to smoke it about an hour before the usual time of the recurrence of the asthmatic fit, as very few can smoke it when the fit runs high. If the bowels are confined, an ounce and a half of castor oil, or some purgative, should be administered. The following draught has been found of great service during a fit of asthma:—

Take of	R
Oxymel of squills, two drachms.	Oxym. scillæ ʒij.
Syrup of poppies, one drachm.	Syrupi papaveris ʒj.
Compound tincture of camphor, half a drachm.	Tinct. camphoræ comp. ʒss.
Ethereal tincture of lobelia inflata, half a drachm.	Tinct. æther. lobeliæ inflat. ʒss.
Ammoniacal mixture, eight drachms.	Misturæ ammoniaci ʒviij.
Mix.	Misce.

Warm clothing is always necessary in asthma. Strong coffee sometimes abates the violence of the disorder; it should be clear, and taken without milk. The inhalation of ether will often afford instant relief in a paroxysm.

## BOILS.

Boils are hard, circumscribed, painful tumours; they always have a central core, and are mostly found in persons of high rank, and in the vigour of youth. They rarely require medical or surgical treatment, unless the person has many, and then bleeding and purging are required; but, in delicate constitutions, a course of sarsaparilla should be preferred. In inflammatory boils, which are slow in suppurating, stimulating poultices, composed of onion, garlic, or yellow basilicon mixed with the white of an egg, and the common poultice, may possibly forward the suppuration. After they break, they require only to be kept clean, and defended from the external air by mild poultices, or diachylon plaster, or white cerate spread on lint.

## BOILS, GUM.

A gum-boil is sometimes a primary disease, depending on an inflammation of the gums from accidental and common causes, in

which case the lancet, or leaving it to nature, soon restores the gum to a healthy state; but it more generally arises from a carious tooth, in which case extraction is necessary. If there be any constitutional disturbance about the face, leeches and purgatives and the usual means for subduing inflammation may be resorted to.

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## BURNS AND SCALDS.

The injured part should be plunged without loss of time into very cold spring or ice water, or else fresh cold water should be poured plentifully over the burnt or scalded surface. Pounded ice, enclosed in folded linen or lint, is an excellent application for scalds and burns situated on the head, back, and other parts, which cannot be conveniently immersed in water. These applications should be frequently renewed, as they soon become of the same temperature as the parts with which they are in contact. Where the skin is broken, dress the part with Goulard cerate. If the person be of a plethoric habit of body, or if the system become feverish, however trifling the accident may be, it will be prudent to give mild aperient medicines, with the antiphlogistic regimen. Opium is also indispensable where there is much pain, as it not only diminishes the suffering, and procures sleep, but also lessens the disposition to various other dangerous symptoms. Cotton wool has lately been applied to scalds and burns with great success. It should be used immediately after the accident, and allowed to remain until all the pain has ceased, or until it drops off with the scurf skin. No family should, therefore, be without this simple means of remedying the most painful of accidents. Equal parts of lime water and olive oil are also used to allay the heat and inflammation consequent upon burns and scalds. The following liniment is recommended by Professor Knackstedt, as the best topical application in extensive burns:—

Goulard's extract and olive oil, of each one ounce.

Rose water, four ounces.

Should this liniment produce suppuration too copiously, the following ointment may be used:—

Flowers of zinc, calamine powder, and lycopodium, of each one ounce.

Powdered myrrh and sugar of lead, of each half a drachm.

Lard, one ounce and a half.

Mix.



## BLEEDING FROM THE NOSE.

Bleeding from the nose is generally an effort of nature to relieve a congested or plethoric state of the blood-vessels about the head; and, unless immoderate, it is for the most part inexpedient to interfere with it. When much general excitement prevails, the antiphlogistic regimen is to be adopted. The best local application are dossils of lint, or the scrapings from a beaver hat, put up the nostrils so as to plug them, and permit a coagulum to be formed; the lint may be dipped in a strong solution of alum or of the sulphates of zinc or copper. The sudden plunging the head into cold water, impregnated with salt, has been had recourse to with success when other plans have failed.

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## BRUISES AND SPRAINS.

In the treatment of sprains, a hot fomentation has been found of the greatest service, and should be continued for at least half an hour. If immediately upon the occurrence of the accident a hot fomentation of strong vinegar be applied, the part will be much relieved, if not permanently cured. After the fomentation the sprain part should be carefully dried, and may if necessary be gently rubbed with the ethereal or cajeput opodeldœ; to which should be added, in case of much pain, a little laudanum. Should there be much inflammation, friction must not be resorted to, but leeches, followed by fomentations, an aperient draught occasionally, and the antiphlogistic regimen, will be necessary. For all severe injuries surgical advice ought to be obtained. Equal parts of camphorated spirits of wine, distilled vinegar, and turpentine, mixed together, and well rubbed on the part affected, have sometimes been found serviceable in relieving the pain, but all of these will avail little unless perfect rest be enjoined.

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## CATARRH.

The symptoms of common catarrh are,—a sense of fulness in the head; redness of the eyes; fulness and heat of the nostrils, which pour forth a thick aerimonious fluid, excoriating the skin as it descends, accompanied with frequent sneezing; the voice is hoarse; the throat sometimes sore; and the lungs loaded, often producing a troublesome cough.



*Treatment.*—Where the attack is slight, medical aid is not often sought for, or needed. It will, however, be right to enforce an abstemious regimen, and to drink copious draughts of warm diluent mucilaginous liquids; such as barley-water, thin gruel, &c., acidulated with a small quantity of lemon-juice and syrup of capillaire; or to take the common saline mixture. A hot water-bath or vapour-bath, used immediately before going to bed, is extremely beneficial, provided the patient is careful to wrap himself well up in a flannel gown. Should there be much catarrhal irritation, the following articles may be useful:—

Take of	R
Purified nitre, ten grains.	Potassæ nitratis gr. x.
Sweet spirits of nitre, one drachm.	Sp. ætheris nitrici ℥j.
Syrup, one ounce and a half.	Syrupi simp. ℥iss.
Syrup of Tolu, two drachms.	Syrupi Tolu, ℥ij.
Mix.	Misce.

But if there be a sense of oppression on the chest, or of fulness in the head, with the ordinary signs of fever, bleeding, general and topical, should be had recourse to, and a brisk purgative immediately afterwards, while the preceding process is still continued. If the cough should be troublesome at night, it will be best allayed by a dose of Dover's powder or extract of lettuce.

In order to promote expectoration, small and frequently repeated doses of antimonials, or other diaphoretics, should be taken, and their effect assisted with plenty of mucilaginous drinks, as previously advised.

The prevention of catarrh is highly important, especially to persons who possess a weak constitution, or who are in any way predisposed to pulmonary complaints; to such persons a residence in a warm and temperate climate, wearing flannel or chamois leather next the skin, and especially keeping the feet warm and dry, should be strongly recommended.

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## CHILBLAINS

Are painful inflammatory swellings of a deep purple or leaden colour, to which the fingers, toes, heels, and other extreme parts of the body are liable, attended with an intolerable degree of itching.

*Treatment.*—In common cases, as soon as any part becomes affected, rub it with spirits of rosemary, or aromatic camphorated cream; afterwards apply pieces of soft linen, moistened with cam-

phorated spirits, soap liniment, camphor liniment, &c. When the swellings break or ulcerate, apply poultices and emollient ointments for a few days. Persons subject to chilblains should, on the approach of winter, cover the parts liable to be affected with woollen gloves and stockings, and not expose the hands and feet too precipitately, when cold, to a considerable degree of heat. The feet and hands should also be frequently rubbed with the naked hand, with a fleshbrush, or with flannel; and as much exercise should be used as circumstances will admit of. Equal quantities of sweet oil, lime-water, and proof-spirits, form an excellent application for chilblains; but where the vessels exhibit much congestion the more stimulating liniment of soap, ammonia, and cantharides will be requisite.

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### CHOLERA MORBUS.

This disease is supposed to be the effect of a warm atmosphere producing some change in the state of the bile, which change may either render it more acrid, or dispose to a preternatural secretion of it. It has, in some instances, been observed to proceed from obstructed perspiration; also from food which has passed rapidly into the acetous fermentation, from unripe fruits, &c. The symptoms of this formidable disease are of a kind not to be misinterpreted, and may be summed up into violent vomiting and purging at the same time. Cramps are frequently the first signs of this disorder, which should be immediately attended to. Those persons who are thus affected, should, if possible, go at once into a hot-bath, and then go to bed: if they cannot obtain a bath, let them put their feet into hot salt and water, with a little mustard, taking great care that the extremities do not become cold.

*Treatment.*—Diarrhoea (relaxation of the bowels) is the most frequent precursor of the disease. If this arises from any article of food which has disagreed with the stomach, aperients must be resorted to. Three grains of calomel, and twelve of rhubarb, made into six pills; two to be taken once, twice, or thrice in the day, according to the violence of the attack, will be the best purgative to employ. If the extremities are cold at night, it will be necessary to put them in hot water; and if there should be much restlessness, twenty grains of Dover's powder will be the best medicine to secure sleep. The next morning a wineglassful of senna-tea will most probably effect a cure. Should the bowels be much relaxed, the ordinary chalk mixture, in doses of a table-

spoonful for an adult, will be of great service. If there be much pain in the bowels, fifteen or twenty drops of laudanum may be added to the draught.

Nausea and sickness must also be attended to, and the treatment must vary in those cases which proceed from overloading the stomach, and in those which are caused by exhaustion from long abstinence, or great fatigue, or anxiety. In the first case, if the tongue be foul, and there be pain in the head, an emetic of twenty grains of ipecacuanha will be the best remedy. If the sickness arises from exhaustion, a small quantity of arrow-root, with a table-spoonful of burnt brandy, will frequently relieve it.

If the vomiting or pain continue violent after the above treatment, the following pills and draughts may be given:—

Take of	R
Camphor, twelve grains.	Camphoræ gr. xij.
Carbonate of ammonia, eighteen grains.	Ammoniæ sesquicarb. gr. xviii.
Calomel, twelve grains.	Hydr. chloridi gr. xij.
Cayenne pepper, eighteen grains.	Pip. Cayenne gr. xviii.
Powdered gum Arabic, six grains.	Pulv. acaciæ gr. vj.
Oil of cloves, five drops.	Olei caryoph. gtt. v.
Mix, and divide into eighteen pills.	Misce.

One to be taken every half hour, with the following draught:—

Take of	R
Mintwater, ten drachms.	Aquæ menthæ ℥x.
Carbonate of potash, half a drachm.	Potassæ carbon. ℥ss.
Tincture of capsicum, fifteen drops.	Tinct. capsici gtt. xv.
Laudanum, five drops.	Tincturæ opii. gtt. v.
Compound spirit of lavender, half a drachm.	Sp. lavandulæ comp. ℥ss.
Syrup of ginger, one drachm.	Syr. zingiber. ℥j.
Mix, and make a draught.	Misce.

*Treatment to be adopted for a severe attack.*—The first thing necessary is to get abundance of hot water ready, to light a fire in the room, and to have plenty of mustard at hand. For those who can afford it, the hot-air bath should be obtained; if this is unattainable, it may be in a great measure superseded by the use of bottles of hot water wrapped up in flannel, and applied to the stomach and back. The exhausted powers of the constitution must be rallied by stimulants, such as laudanum, oil of peppermint, and brandy, taken every five or ten minutes. The next most useful remedy is to apply a hot mustard poultice to the pit of the stomach. The way to make this poultice is to take equal parts of mustard and common flour, or linseed meal, and mix them together with boiling water to the consistence of a very thick paste;

this must be done quickly, and near the fire, lest it get cold. The poultice should be immediately bound firmly on with a linen bandage or sheet doubled up; the closer it is tied on to the body, the longer it will retain its heat. If these attempts to revive the circulation fail, the other more active measures must be left to the direction of a physician, who should always be sent for on the first attack of this disease.

*Symptoms and Treatment of Malignant or Asiatic Cholera.*—At the time when malignant cholera may be prevalent, all unusual looseness of the bowels should be considered as a symptom of considerable importance, and should be carefully attended to; for by simple attention to this precaution, many attacks of cholera, in its fully developed form, will be prevented.

After a shorter or longer continuance of this diarrhœa or even without its previous occurrence, the symptoms of the cold stage of the disease and from which it derives its designation, commence. These are vomiting and purging of a peculiar fluid, resembling rice-water or thin gruel, very copious, and which restores the colour of reddened litmus paper; violent cramps very soon attend these evacuations, and affect, in severe cases, nearly all the muscles of the body, but especially those of the legs and belly. The secretion of urine ceases, the voice becomes faint, hoarse, and at last almost inaudible; the skin is cold, damp, and livid, as that of a corpse; the features sink, and an intolerable thirst torments the miserable sufferer. Cold as he appears, he complains of being burnt up with an inward fire, and his insatiable cravings for cold drinks, which serve but to supply the stomach with fluid to be immediately rejected, mark the agony of this feeling. The pulse soon ceases to be perceptible at the wrist—the vital powers fail more or less rapidly,—death, in severe cases, soon closes the scene, and sometimes in a very short time. The same symptoms, but in less urgent degree, mark the course of the disease in its milder form, and in which the powers of life may be able, eventually, to throw off their deadly foe. In these cases, after twenty-four to thirty hours of the stage of *collapse*, as it is termed, reaction sets in, and a febrile condition ensues, which is marked by some peculiarities, and attended by certain symptoms, which indicate an important point in the treatment of this stage of the disease. This peculiarity consists in many cases in the continued suppression of the urinary secretion; and the symptoms caused by this are, at first excitement, and afterwards oppression of the functions of the brain. The skin is hot and dry, and the tongue dry, red, and glazed. This febrile stage does not always follow

even severe cases of collapse, but does so frequently, and has often proved fatal, after all danger had apparently ceased.

*Treatment.*—Little need here be said upon the treatment of a disease like this, which has baffled the best-directed efforts of medical skill, and which, in its severe form, appears to be quite beyond the reach of human art. Little even can be done for the temporary relief of persons so affected, and this consideration should render every one more alive to the importance of attending to the *premonitory diarrhœa*, which may often be checked by appropriate remedies, and the further progress of the disease thus prevented. For this purpose, the treatment may be commenced with this draught:

Take of Rhubarb powder,  
Carbonate of magnesia, of each one scruple.  
Powder ginger, five grains.  
Tincture rhubarb, one drachm.  
Peppermint-water, one ounce.  
Mix.

Which is to be followed in a few hours by twenty grains of compound chalk powder, with opium, which is to be repeated every four or six hours. The other remedies recommended under the head of *Diarrhœa*, may also be employed. In the cold stage, little can be done, where the symptoms are very violent; and where they are less so, experience has not yet pointed out any mode of treatment which should be exclusively followed. The most opposite modes of treatment have had the same vaunted success, and all, in turn, have been equally unsuccessful. Perhaps the best mode of treatment would consist in the administration of opium, and brandy in moderate quantities, debarring the patient only from *immoderate* drinking. The frequent exhibition of large doses (twenty grains every half hour,) of calomel, has, in our hands, been attended apparently with a beneficial effect in some extremely bad cases. Friction of the extremities with hot salt, turpentine, and mustard, should also be employed for the relief of the cramps.

Warm bathing is usually very distressing, or in fact, much external warmth applied in any way.

Should nature or art bring the patient through the cold stage, the secondary fever, if it should follow, requires attention, and every endeavour should be made to restore the secretion of the kidneys. This is to be effected first by cupping, leeching, and blistering over their situation in the back, and by the moderate use of saline purgatives and diuretics, as nitre, and cream of tartar (*see those Articles*). Blisters also behind the ears, or on the

neck, and between the shoulders, will be found of considerable use, where the symptoms of disturbance of the brain are strongly marked.

*Hints regarding the Prevention of Cholera.*—The most important, and perhaps the most difficult precept to practise, is the regulation of our *diet*. All kinds of fish ought to be discontinued, more especially shell-fish. Cherries, gooseberries, and apples, must be condemned; but a few strawberries, or ripe pears, or raspberries, may be indulged in with the least danger. All kinds of pastry, as fruit-pies, puddings, &c., are very improper, and also ought to be refrained from. Cheese may be taken in small quantity, as well as butter.

The safest regimen is that which is the simplest: for breakfast, dry toast, with a little butter, and coffee. Those who have been accustomed to take meat at this meal should continue it, but gradually decrease the quantity. For, dinner, plain roasted beef or mutton with one kind of vegetables—potatoes are preferable to others, if they are not too young. Persons who have a feeble digestion should take weak brandy and water with this meal.

All persons should be careful not to take very cold liquids into the stomach when suffering from heat; nothing is more likely, from the sudden depression produced in the system, to produce a relapse. All acids, acerb drinks, and ices, must be rigidly abstained from.

In respect to clothing, we must be very cautious not to leave off suddenly any portion of what we have been accustomed to wear. Those persons who have had flannel next their skin during the winter must not relinquish it from the idea of the weather being too warm.

With regard to general habits, we must be careful not to take too much exercise, if unaccustomed to it, such as long walks, &c.; nor to use violent exertion, which is likely to produce exhaustion, in which state there is always danger. Persons who are not accustomed to bathe should not indulge in that pastime; a long continuance in the water has generally a bad effect upon the constitution. All these points, that would at other times appear trifling, ought to be taken into account when an epidemic is abroad, and against which our best preservative is that attention to our habits which will be likely to sustain or improve our general health. Whatever depresses the mind, or debilitates the body, favours an attack of this disease.



## COSTIVENESS.

Costiveness, in its simple and constitutional form, is rather troublesome than dangerous. Females in this country are more subject to costiveness than males, owing both to constitutional weakness, and to their employments being of a more sedentary nature, and seldom united to active bodily exertion. There is also evident reason to believe, that several diseases incident to females take their rise from neglect in regard to this necessary evacuation, from a false notion of delicacy which prevails in boarding-schools, both as regards the confinement to study, and the dislike to its being known that the calls of nature require to be relieved.

The cause of costiveness arises from various circumstances: sometimes the food is too insipid, or destitute of stimulants; sometimes there is a deficiency of bile, which is the natural stimulus of the bowels; and what is more frequently the cause than any other, the bile that is secreted is insufficient for the purpose of imparting a due stimulus to the intestines.

The *medical treatment* of costiveness consists in adopting a diet free from all astringents, taking care especially that there is no alum in the bread, and using a coarser kind with digestible vegetables, and supplying proper stimulants when the peristaltic motion is enfeebled. Roasted or boiled apples, pears, stewed prunes, raisins, gruel with currants, butter, honey, sugar, broths with spinach, leeks, and other soft pot-herbs, also beet-root, and turnips, are excellent laxatives; and the best medicines are the mild purgatives, as castor oil, manna, &c. Malt liquor, buttermilk, whey, and such watery fluids, as generally prove of an aperient nature, should be resorted to as drink. Besides this, a strict attention to bodily exercise, a due proportion of liquid to our solid food, particularly at dinner, a proper choice and due quantity of solid food, avoiding too much indulgence in sleep, rising early, and going abroad in the open air, are indispensably necessary.

In the more aggravated state, where the peristaltic motion is generally faulty from its sluggishness, and the subjects are weak and prone to sedentary habits, the compound aloetic pill, and the compound extract of colocynth, with a little ipecacuanha, will be the best kind of medicine.

The celebrated philosopher Locke observes, that going to stool regularly has a great influence on the health; and he asserts, that if any person, after his first meal in the morning, would presently



and daily solicit nature so as to obtain a stool, he might in time bring it to be habitual. A basin of warm water, used with any of the enema apparatus now in use, opens the bowels without inconvenience or uneasiness, and generally removes many disorders arising from a confined habit of body.

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## COUGH.

With respect to the treatment of cough,—that which is produced by the irritation of the phlegm, and by exposure to cold, requires diaphoretics, demulcents, and expectorants; such as small doses of Dover's powder, with saline draughts, tepid pediluvia, warm baths, and ptisans of barley-water, oily emulsions, and pleasant mucilaginous mixtures, made with oil of almonds, syrup of poppies, and oxymel of squills, with ipecacuanha wine; but where the cough has become more habitual, and attends old age, the more stimulating expectorants, as garlic, ammoniacum, benzoin, &c., are requisite. The lettuce, the pâte de lichen, and the ipecacuanha lozenges, have frequently been found to allay a recent catarrhal cough.

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## COUP DE SOLEIL, OR STROKE OF THE SUN.

This is a species of apoplexy which frequently occurs in warm climates, where men are exposed to much fatigue, or get intoxicated, and carelessly expose themselves to the sun. It first begins with great headache, thirst, and sometimes difficult breathing, which are soon succeeded by vertigo and bilious vomiting. The patient then drops down breathless, turns comatose, and unless immediate assistance is given, the face swells and turns black.

The pulse, at first full and quick, soon sinks, and after a few faint struggles for breath, the unhappy victim expires. The means to be employed here require to be instantly had recourse to. The body should be removed to a cool situation under a shade, and the air cooled by fanning it round the body; blood should be freely drawn from the jugular vein, temporal artery, or arm; cold water, rendered even artificially so, should also be given to drink, and the forehead and hands bathed with it.

A large blister should be applied betwixt the shoulders, and ten grains of calomel and fifteen of jalap should be given immediately.

## CRAMPS, OR SPASMS.

The parts chiefly attacked with cramp are the calves of the legs, the neck, and the stomach. The common causes are sudden exposure to cold, drinking cold liquids during great heat and perspiration; eating cold cucurbitaceous fruits when the stomach is infirm and incapable of digesting them. Cold night air is also a common cause of cramp.

*Treatment.*—In common cases, where the calves of the legs are affected, an excitement of the distressed muscles into their usual train of exertion is found sufficient; hence most people cure themselves by suddenly rising into an erect position. Warm friction with the naked hand, or with camphorated oil or alcohol, will also generally be found to succeed. Where the stomach is affected, copious draughts of hot water, or brandy and water, ether, or laudanum, afford the speediest means of cure. Hot flannels, moistened with compound camphor liniment and turpentine, as directed by Dr. Copland, or a bladder nearly filled with hot water, at 100° or 120° of Fahrenheit, should be applied to the pit of the stomach; bathing the feet in warm water, or applying mustard poultices, to them, is frequently of great advantage. The best preventives, when the cause of cramp is constitutional, are warm tonics, such as the essence of ginger and chamomile, Jamaica ginger in powder, &c., avoiding fermented liquors and green vegetables, particularly for supper, and wearing flannel next the skin.

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DELIRIUM TREMENS.

*Symptoms.*—Trembling and shaking of the hands and of the whole body; total want of sleep, loss of power of the brain, producing delirium, in which the patient imagines that some great evil has befallen him; he is tormented with the most frightful visions, and is suspicious of every person about him, but most particularly of his friends; usually pain on pressure upon the pit of the stomach, and total loss of appetite. The tongue is moist, the face is pale generally, the skin cool and clammy, and the pulse small and quick. These are the usual distinguishing symptoms of this disease, but it is sometimes complicated with congestion of the brain, and in such cases the pulse will be full, frequent and hard, the face flushed, and the skin hot and dry.

*Causes.*—Immoderate use of ardent spirits, and the sudden

total abstinence from intoxicating liquors after a long indulgence in their use.

*Treatment.*—When it arises from suddenly leaving off drink, and is accompanied by pale countenance, small pulse, coldness of the head and skin, and loss of power, the preparations of opium must be freely administered, as well as the stimulants to which the patient was accustomed, whether gin, brandy, or wine. The patient may take the following draught every three or four hours until sleep is produced:—

Take of Tincture of opium, forty drops,  
Compound tincture of cardamoms, four drachms,  
Camphor mixture, one and a half ounce.  
Mix.

Wine, brandy, and gin, should be also freely drunk, and strong beef-tea, or other nutriment should be given. In the other form of delirium, accompanied by congestion, leeches should be applied to the temples, and the head kept cool by means of a bladder filled with very cold water, or iced water, and saline purges administered (*for form of mixture see Epsom Salts*).

When the inflammatory stage is reduced and the delirium continues, the means already recommended will be necessary.

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## DIARRHŒA, OR LOOSENESS.

This disease consists in frequent and copious evacuations of liquid stools, preceded generally by a murmuring noise and a little pain in the bowels. It is not, like dysentery, a contagious disease. The disorder is frequently a matter of trifling importance, at other times it is productive of serious consequences.

Diarrhœa may originate from various causes. In some constitutions, a draught of cold water, beer, milk, &c., immediately affects the bowels, especially if the individual is heated at the time; ices, raw vegetables, and fruit, are often productive of the same effect. Diarrhœa is also a very common occurrence in infants when the nurse's milk disagrees, or when the food is too stimulant for their digestive powers, or in too great quantity. It is, also, frequently the effect of immoderate eating, part of the food not being properly digested; the bowels are thereby irritated, and frequent evacuations are the consequence.

*Treatment.*—Before any decisive treatment to check diarrhœa be adopted, the nature of it should be well ascertained. If it has arisen from excess, or from crude and acrid matter in the stomach,

a gentle emetic should be given in the evening, and the following draught in the morning :—

Take of	R
Powdered rhubarb, one scruple.	Pulveris rhei, ℥j.
Aromatic confection, half a scruple.	Conf. aromaticæ ℥ss.
Sal volatile, thirty drops.	Sp. ammoniæ aromat. gtt. xxx.
Cinnamon water,	Aquæ cinnamomi,
Distilled water, of each six drachms.	Aquæ destillatæ, aa ʒvj.
Syrup of rhubarb, one drachm.	Syrupi rhei ʒj.
Mix.	Misce.

If it has proceeded from obstructed perspiration, in consequence of exposure to cold, five grains of James's powder should be given every three or four hours; and, on going to bed, the patient should put his feet in warm water. Besides these remedies, the free use of diluent and demulcent drinks, such as barley-water, decoction of marshmallows, linseed tea, or toast and water, may be resorted to.

If diarrhœa should exist to a great extent, accompanied with much pain, the tongue being red and beginning to get dry, and the stomach retaining with difficulty its food, it will be advisable to give the following draught :—

Take of	R
Aromatic confection, one scruple.	Confect. aromaticæ ℥j.
Opiate confection, half a scruple.	Confect. opii. ℥ss.
Powdered rhubarb, six grains.	Pulveris rhei gr. vj.
Cretaceous powder, one scruple.	Pulveris cretæ ℥j.
Cinnamon water, ten drachms.	Aquæ cinnamomi ʒx.
Sal volatile, half a drachm.	Spirit. ammoniæ aromat. ʒss.
Syrup of poppies, one drachm.	Syrupi papaveris ʒj.
Mix.	Misce.

Persons subject to irritation of the bowels should wear flannel next the skin, take food which braces and strengthens the bowels, such as wheaten bread of the finest flour, biseuit, eggs, rice, rice boiled in milk, &c. The drink should be port wine or claret.

## DYSENTERY.

This disease is characterised by violent griping, and straining at stool, attended with frequent, scanty, and mucous or bloody discharges from the intestines. With these symptoms there are a loss of appetite, sickness, and sometimes vomiting; and the patient, sooner or later, becomes affected with fever, which is sometimes inflammatory, and very often of a low or putrid kind.

The disease occurs especially in summer and autumn, and is more frequent in warm than in cold climates.

*The treatment* will require to be varied considerably, according to the peculiarity of the circumstances of the case, but more especially if the disease is acute or chronic. In the early state, and more acute form, the principal indications are, first, to lessen inflammatory action by bleeding in the arm, if the strength of the patient will admit of so doing; or, if not, by leeches or cupping, and by the application of blisters; but this treatment will seldom be necessary, as the fever in dysentery most commonly assumes a low character, when the treatment proper for typhus will be required. Secondly, by evacuating the matters contained in the stomach and intestines by an emetic of ipecacuanha, by mild purgatives, and bland mucilaginous drinks. Thirdly, to lessen irritation, and to restore the tone of the intestines, by opiates conjoined with calomel or ipecacuanha, the warm bath, fomentations and embrocations, and lavements made with starch. Several astringent and bitter medicines are recommended in this period of the disease, such as calumbo, cascarilla, and Peruvian bark. The room of the patient should often be fumigated with nitrous vapour, which will not only prevent the disease from spreading, but contribute considerably towards recovery.

Warm fomentations and stimulant embrocations to the abdomen will sometimes be found serviceable. Rice, barley, arrow-root, oat-meal, sago, and animal broths, are the proper articles of diet.

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## EAR, DISEASES OF.

The diseases of this organ are numerous, and their effect is generally a partial or total destruction of the function of hearing.

*Inflammation and suppuration of the ear* is generally accompanied with considerable pain darting through the ear, redness, and heat;—these either gradually diminish, and at length entirely cease, or an acrid fetid matter is discharged from the ear. During the inflammatory state, water, as warm as the patient can bear, should be thrown into the ear by means of a syringe, and the part fomented with the decoction of poppy heads, and chamomile flowers. Should this not relieve the pain, a drop or two of laudanum, with one drop of oil of almonds, should be dropped into the ear, and a piece of cotton wool introduced afterwards.

Where there is much discharge, injections of warm soap and

water, blisters behind the ear, or a drop or two of the following mixture put into the ear with a little cotton, generally prove very beneficial :—

Take of Ox gall, three drachms,  
Balsam of Peru, one drachm.  
Mix.

A few grains of musk introduced into the ear with cotton wool have been employed with great success in diminishing the discharge.

As deafness is sometimes the consequence of diseases of the ear, the advice of an experienced surgeon should be taken in the first instance.

## EPILEPSY.

This disease consists in a sudden privation of sense, accompanied with violent convulsive motions of the whole body, frothing at the mouth, followed by drowsiness, great fatigue, and entire oblivion of the fit. It recurs at intervals, and often attacks the patient during sleep. A fit of epilepsy is generally preceded by heavy pain in the head, dimness of sight, noise in the ears, palpitation, &c., but more usually the patient falls down suddenly without much previous notice.

*Treatment.*—This will vary according to the cause. If it proceeds from worms, the oil of turpentine, in doses of from half an ounce to an ounce, or some active purgatives, will be found serviceable; if from teething, scarify the gums freely, give laxative medicines, or emollient clysters, and bathe the feet frequently in warm water. If there be evident determination of blood to the head, and more especially if the patient be of a plethoric habit, bleeding from the arm will be proper, if the patient can be kept steady; if not, leeches may be applied behind the ears.

If the disease be dependent on weakness, or nervous irritability, the use of strong stimuli and tonics will become expedient. Of these the various preparations of steel, the nitrate of silver, oil of amber, sulphate of copper, and sulphate of zinc, will be found most efficacious. The tincture of the seeds of colehium has lately been administered with great success. The dose is from twenty-five to forty drops, two or three times a day.

During the fit, great care should be taken that the patient does not injure himself; and it will be prudent to remove anything



which may compress the veins of the neck, to obviate congestion of the head.

The following are forms for administering the above tonics :—

Take of Nitrate of silver, two grains,  
Conserve of roses, ten grains.

Mix, and divide into two pills, one to be taken three times a day; or—

Take of Oxide of zinc, four grains,  
Extract of gentian, ten grains.

Mix, and divide into three pills, which may be taken three times a day.

While administering these medicines, it will be necessary to attend to the state of the bowels, and the secretions; and if any marks of plethora present themselves, these must be met by local, if not by general bloodletting, even at the time that we are persisting in our general tonic plan of treatment.

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## ERYSIPELAS

Is the name commonly given to a peculiar kind of inflammation of the skin, characterized by a diffused redness and fulness of the part, a burning or itching pain, and frequently by vesications and fever.

In its mildest form it is preceded by no particular complaints, or merely by a very slight indisposition, languor, restlessness, loss of appetite, &c. These symptoms are of short duration, and often abate as soon as the inflammatory rash appears. In more severe cases the patient experiences, for a couple of days before the erysipelas breaks out, unusual debility, heaviness in the limbs, headache, loss of appetite, actual vomiting, oppression about the chest, &c.

In that species of erysipelas which mostly attacks the face, the patient is affected with severe fever, headache, drowsiness, or stupor, shiverings, vomiting, delirium, &c. These symptoms continue with undiminished vehemence until the local disorder itself goes off, which usually happens about the eleventh day, attended with copious evacuations from the skin and kidneys.

*Treatment.*—In simple inflammation of the skin, unaccompanied with much fever, it is unnecessary, even when the erysipelas attacks the face, to do much more than confine the patient to



diluent acidulated drinks, keep the bowels open by mild aperients, and order the feet to be placed in a warm bath, impregnated with mustard.

But when erysipelas comes on with strong febrile reaction, and the patient is young, the copious abstraction of blood from the arm is necessary, especially if the inflammation is seated in the face, head, or breast, directing cooling saline purgatives, antimonial diaphoretics, and a light vegetable diet, to be given. But if the disease exhibits a low or typhoid type, and particularly where there is a tendency to gangrene, the patient's strength must be supported by a moderate quantity of wine, by bark with sulphuric acid, and by other tonics. Preparations of ammonia are of the first importance in cases of erysipelas. Should the inflammation, quitting the skin, attack an internal part, a blister may be applied. In all severe cases of the disease, the advice of an experienced physician or surgeon should not be delayed.

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### FAINTING, OR SYNCOPE.

A fainting-fit generally begins with great anxiety about the heart and lungs; the pulse and respiration become suddenly weak, and sometimes to such a degree as to all appearance wholly to cease; with coldness of the extremities, and deathlike paleness of the face, &c. Vomiting is not unfrequently a concomitant of syncope, and generally affords relief.

*Treatment.*—The first thing necessary to be done in syncope, arising from some momentary or accidental cause, is to place the patient in the horizontal posture, sprinkle cold water over the face, and bathe the hands with vinegar and water; the dress should be loosened, and a current of fresh cool air freely admitted. Volatile pungent salts, with ether and eau de Cologne, should be held to the nose momentarily, but frequently, and the temples rubbed with them. As soon as consciousness returns, a small quantity of wine, cold water, or some aromatic water, containing ten or twenty drops of camphorated sal volatile or ether, should be administered. If syncope continues a long time, and the state of the patient becomes alarming, we must endeavour to arouse him by frictions with the tincture of Spanish flies, volatile liniment, or hot spirit of camphor, along the inner side of the thighs, and by administering some irritating enema.

## FLATULENCY.

By this is understood a morbid collection of air in the stomach and bowels, which is sometimes formed in very large quantities. According to the experiments of Dr. Hales, it appears that a single apple, during fermentation, will give out about six hundred times its bulk of air, while many of the vegetable materials introduced into the stomach possess far more ventosity than apples. Flatulency is often a symptom of other diseases, especially of indigestion, colic, cholera, hysteria, and hypochondriasis. It is frequently caused by drinking a large quantity of some cold fluid while the system is heated, or by eating raw vegetables, cucumbers, radishes, salads, &c.

For the *treatment* of this disease, earminatives, mild aperients, and tonics, are resorted to; such as spicy fruits, and earminatives, nutmegs, cardamoms, allspice, pepper, camphor, peppermint, cinnamon, rosemary, lavender, pennyroyal, &c. The essential oils, or dilute essences, may be formed into pills and draughts. If these do not succeed, ethereal preparations and warm tonics should be given, and the strictest attention paid to the diet, in which all tough vegetables, and peas, beans, and flatulent fruits, should be avoided; also, large draughts of fluids. The diet should consist of roasted and boiled, or boiled meat with peppers, and old wine or good brandy amply diluted, at dinner, in moderate quantity.

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GOUT

Is a painful, inflammatory complaint, resembling rheumatism so closely, that the one is often mistaken for the other. It generally attacks the smaller joints, as those of the fingers, toes, foot, &c.; yet it sometimes affects the knees, ankles, and wrists. It is more generally connected with a dyspeptic state of the stomach than rheumatism is. Its incursions are, for the most part, more sudden; its nocturnal exacerbations less striking, but its remissions much more distinct. While rheumatism mostly begins in the shoulders or elbows, gout always begins in the feet or ankles. Gout is distinguished into four species, the regular, the atonic, the retrocedent, and the misplaced; but the division into regular and irregular is the only one that is practically useful.

The regular gout is characterized by pain, swelling, and bright redness, suddenly affecting the joints of the feet or hands, and

especially the ball of the great toe. It is generally preceded by some unusual affections of the stomach, indicated by flatulency and aerid eructations, and is followed by some degree of fever.

*Treatment.*—The attack of regular gout may sometimes be prevented, or at least rendered much less violent, by having recourse, on the first indication of its approach, to a full dose of *calomel*, with *camphor*, or with *James's Powder*, at bedtime, and a stomachic purgative the following morning.\* In the intervals between the attacks, a vegetable diet, temperate habits, and above all, regular and moderate exercise, must be enjoined. The patient should wear flannel next to the skin, taking care by this, as well as by other means, especially warm bathing, to keep up a free perspiration and healthy condition of the surface.

In early fits of gout, when much inflammatory excitement exists, *colchicum* may be given, conjoined with cooling saline purgatives, and with magnesia, in the following forms, as recommended by Dr. Copland:—

Take of	R
Infusion of senna,	Infusi sennæ,
Mindererus's spirit, of each five drachms.	Liq. ammoniæ acetatis aa ʒv.
Tincture of colchicum, twenty-five minims.	Tincturæ rad. colchici ℞xxv.
Spirit of pimento, half a drachm.	Spirit. pimentæ ʒss.
Mix.	Misce.
Take of	R
Infusion of orange-peel,	Infusi aurantii,
Infusion of rhubarb, of each six drachms.	Infusi rhei, aa ʒvj.
Carbonate of magnesia, one scruple.	Magnesia carbonatis ʒj.
Wine of colchicum seeds, half a drachm.	Vini seminis colchici ʒss.
Compound tincture of cardamoms, one drachm.	Tincturæ cardamomi com. ʒj.
Mix.	Misce.

When gout attacks the stomach, accompanied with a numbness of the limbs, and a rapid palpitation of the heart, the preparations of ether, or of ammonia with warm cordials, may be employed with benefit. The celebrated Warner's gout cordial has been administered with success. The preparations of colchicum, with many other remedies, have been much used as specifics for gout

* Take of	R
Infusion of gentian,	Infusi gentianæ,
Infusion of senna, of each one ounce.	Infusi sennæ, aa ʒj.
Epsom salts, one drachm.	Magnesia sulphatis ʒj.
Compound tincture of cardamoms,	Tinct. cardamomi comp.
Tincture of senna, of each one drachm.	Tinct. sennæ aa ʒj.
Mix.	Misce.

during the paroxysm, with the view of allaying pain, and speedily restoring the health; but, unless cautiously administered, they will be liable to induce symptoms of alarming and ultimately irrecoverable debility. Carbonate of soda, rhubarb, and magnesia, scammony and colocynth, have also been recommended as preventives of gout; but the best preventive will be found in temperate habits and regular exercise, paying strict attention to the functions of the digestive organs, and warding off acidity of the stomach. The following is the celebrated receipt of Dr. Cartwright, who states that, after having been a martyr to gout, he was entirely exempted from it by the use of the following pills:—

Gum guaiacum, two scruples.  
Socotrine aloes, one drachm.  
Camphor, one scruple.  
Castile soap, two drachms.

Mix, and make thirty-six pills, two to be taken every night at bedtime.

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## GRAVEL AND STONE.

The diseases known by the name of gravel and stone, are so nearly allied, that they may be described under the same head. Gravel consists of small sand-like concretions, which are formed in the kidneys, and passed with the urine. Stone is a calculous concretion in the kidneys, or bladder, of too large a size to pass without great difficulty. A fit of gravel is known by a frequent inclination to make water, and to go to stool; pain in the loins, numbness of the thighs, nausea, and vomiting, and not unfrequently a slight suppression of urine. These symptoms often resemble those of inflammation of the kidneys, but the deposition of reddish-brown sand in the urine, on becoming cold, will demonstrate the difference.

*Treatment.*—During a fit of gravel, our chief object should be to allay the irritation and mitigate the pain. The warm bath, friction on the loins, with rubefacient irritants combined with narcotics, or a flannel swathe wrung out of hot water and folded about the parts, laxative medicines, as castor oil, antimonial diaphoretics, emollient and anodyne injections, may severally be resorted to. The diet during the fit should be low, and the beverage consist of the almond emulsion, linseed-tea, barley-water, or decoction of marshmallow-root. When the paroxysm is over, avoid everything that is likely to irritate the kidneys; use an

aqueous and vegetable regimen, moderate exercise on horseback, cold bathing, and mild aperients; and take occasionally the alkaline salts, as potash, soda, or Brandish's alkaline solution. The late Dr. Faleoner, of Bath, strongly recommended soda water. The infusion of buchu, with spirit of juniper berries and soap-les, has occasionally afforded relief. In cases of red gravel, a teaspoonful of magnesia in a little water two or three times a day is an excellent remedy; but, when the gravel is white, a little lemon juice, or ten or fifteen grains of citric acid, will answer best. The remedies for gravel must necessarily depend upon the nature of the deposition; in one case alkalies will be demanded, whilst in others, acids only can be beneficially employed. The use of litmus paper to detect the presence of acidity is most convenient. If, upon immersion into the urine, the paper changes from its blue colour to that like red ink, it denotes the presence of a superabundant quantity of acid, and alkaline remedies are therefore necessary.

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## HEADACHE.

Few complaints are more prevalent than headache. It is generally characterized by an obtuse pain, with a sense of heaviness extending over the whole head. The sight is often dim, the hearing dull, and the memory vacant. This kind of headache is the result of weakness, and is produced by irregular circulation of the blood in the head, mental exertion, and the passions of the mind. Another kind of headache begins with uneasy feelings, or creepings over a part of the scalp, which increase to an acute, and often throbbing pain, within the head, and mostly over one eye. There is some degree of sickness usually connected with it, mostly limited to nausea, but occasionally amounting to vomiting. This is generally termed sick headache, and is generally consequent upon disorder of the stomach.

*Treatment.*—If the complaint proceeds from too great a determination of blood to the head, venesection, or the application of leeches behind the ears, or to the neck or temples, should be resorted to. Along with the abstraction of blood, linen cloths, wetted in vinegar and water, or in camphorated spirits, eau de Cologne, &c., may be applied to the forehead and temples. If it arises from foulness of stomach, it will be advisable to give an emetic; and if costiveness prevails, this should be removed by some mild saline aperient given in a state of effervescence. As a general palliative, strong coffee, or green tea, has often proved

serviceable. For nervous headaches, the sulphate of quinine, and other tonics, with attention to the bowels, are most serviceable.

Dr. d'Huc states, that he has employed with success, in intermittent headaches, a snuff, composed of fifteen grains of sulphate of quinine, mixed with one ounce of tobacco or snuff: the whole to be taken during the course of five or six days.

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### HEARTBURN.

This disease is only a symptom of dyspepsia, and should be considered and treated as a secondary complaint. When it proceeds from acidity, it may be removed for a time by magnesia, or the volatile alkalis; but the absorbent lozenge recommended by Dr. Jenner seems to be the most powerful in correcting the acidity, and affording relief.

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### INCONTINENCE OF URINE.

This disease consists in an involuntary evacuation of urine. When the complaint arises from relaxation, tonics and astringents are indicated; and the principal remedies are the cold hip-bath, bark, blisters over the lowest part of the back-bone, the tincture of cantharides, the shower-bath, and rubbing the spine with camphorated and soap liniment. Incontinence of urine is frequently met with in young boys and girls, arising too frequently from the effect of laziness, or bad habit: in this case they should avoid drinking any fluid, and should empty the bladder before they go to sleep. When, in adult persons, the complaint does not yield to the above precautions, one-fourth of a grain of the powder of cantharides, given with milk of almonds, every evening, has been known to be of service. Great caution is, however, requisite in the use of the Spanish fly. Incontinence of urine is most frequently, particularly in aged persons, a symptom of other disease, and requires the aid of the physician or surgeon.

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### INFLAMMATORY SORE THROAT.

This disease commences with an unusual sense of tightness in the throat, particularly on swallowing, which is often effected with difficulty and pain. The inflammation generally attacks one



tonsil first, which, in a day or two, it sometimes leaves, and affects the other, and not unfrequently quits them both suddenly, and flies to the lungs.

*Treatment.*—If the patient be of a plethoric habit, and the inflammation runs high, bleeding from the arm should be had recourse to. Emetics may be administered at the outset, composed of half a grain of tartrate of antimony (tartar emetic), and two drachms of ipecacuanha wine. If leeches are required, they should be placed under the lobe of each ear. Saline diaphoretic and purgative draughts may be employed according to circumstances. After the inflammation is a little reduced, the following gargle may be frequently used:—

Take of	R
Muriatic acid, twenty drops.	Acidi muriatici gtt. xx.
Syrup of roses, two ounces.	Syrupi rosæ 3ij.
Infusion of roses, six ounces.	Infusi rosæ 3vj.
Mix.	Misce.

Much distress is frequently occasioned by a too general use of gargles in the inflammatory state. They serve only to further disorder in a part suffering from inflammation, and requiring repose. A large warm bread-and-water poultice round the throat forms the best and easiest application that can be used.

## INDIGESTION.

No diseases incident to the human body are more frequent than those of the stomach and bowels, or more fatal in their event, when neglected, or improperly treated. The importance of the stomach is well known to every anatomist and physician. It forms the centre of sympathetic association, it extends its influence to the brain and to the heart, governs every subordinate spring of the human frame, and diffuses health or disease to the most remote parts of the body. Could we but see the stomach and intestines busily employed in the concoction of our food by a certain undulatory motion; the heart working day and night, like a forcing pump; the lungs blowing alternate blasts; the humours filtrating through innumerable strainers; together with an incomprehensible assemblage of tubes, valves, and currents, all actively and unceasingly employed in support of our existence, we could hardly be induced to stir from our places from dread of deranging the wonderful machinery, and that vital emanation which sets and keeps the whole in harmonious motion.



The increased number of stomach complaints may, in a great measure, be attributed to modern luxury. The stomach becomes satiated with the great variety of food it is compelled to receive, and, from being kept in a constant state of excitement, is rendered sooner or later incapable of performing its functions. Dyspepsia, or indigestion, is sufficiently characterized by the following symptoms:—Loss of appetite; nausea, with occasional vomiting; sudden inflation, with pain in the stomach and bowels; acidity, with cramp or spasms; tremors, fainting, palpitation; incubus, or night-mare; drowsiness, stupor, headache, cold legs and feet, dimness of sight, vertigo, incapability of steady thought; pyrosis, or water-brash; and constipation of the bowels, sometimes alternating with diarrhœa, or looseness. When costive, the urine is high-coloured, and small in quantity; when the bowels are relaxed, colourless, with an increased secretion. These sympathetic affections frequently arise from intemperate habits of eating and drinking, inducing debility, and rendering the stomach incapable of performing its office. To understand the manner in which the digestive organs suffer from intemperance, it may be necessary to sketch the outline of the process of digestion. In health it is uniform, and may be described in the following manner:—

The food taken into the mouth is broken down by mastication; and, by mixing with the saliva, it is macerated and reduced to a pulp: thus prepared, it is conveyed into the stomach, where it is subjected to the action of the gastric liquor, and further reduced to a soft mass, called the chyme. This mass is then expelled from the stomach into the alimentary tube, where, mixing with the bile, its most nutritious parts, like a fine emulsion which is called chyle, are strained off, and absorbed by the lacteals or milky vessels, and discharged into the receptacle of chyle, whence, by the thoracic duct, they are conveyed into the blood, and, by agitation in the lungs, and repeated circulations with the general mass, at last acquire the same colour, quality, and consistence, as that fluid; or, in other words, they are elaborated into and assimilated with blood.

It therefore becomes manifest, that whatever weakens the digestive energies, and prevents the formation of a pure and perfect chyle, must sooner or later disturb the whole system. There can be no doubt, that the process of digestion being deranged, an imperfect chyle is formed, too crude to incorporate with the blood without producing innumerable mischievous effects.

*Treatment.*—The dyspeptic symptoms before enumerated being indicative of a debilitated state of the stomach induced by intemperance, the means most likely to relieve, and finally to remove

them, will be the avoidance of all stimulants (that may act directly or indirectly on the stomach), and the use of appropriate medicine.

The remote cause of dyspepsia is intemperance; it matters not whether it be intemperate exercise of the mind or body, indulgence in late hours, exposure to the impure air of heated and crowded apartments, or excess in what we eat or drink. Either of these excitements, if long continued, will weaken the digestive organs, and induce dyspepsia; therefore they must be strictly avoided before the patient can hope for the relief or the cure of his ailments.

Temperance in all things must be rigidly enforced, particularly in the exercise of the body or mind, and in the quantity and quality of the aliment. Whenever it is practicable, all former habits, especially those of an injurious tendency, should be abandoned.

This being observed, the following brief outline of a dietetic plan may serve as a guide:—

For breakfast—tea, coffee, or cocoa, with a large proportion of milk (together not exceeding two-thirds of a pint), with toasted or stale bread, and cold beef or mutton, in small quantity. New bread and hot rolls should be prohibited.

For dinner, the quantity of animal food ought to be moderate, but should greatly exceed the vegetable, being more easily digested, affording a much greater proportion of nutriment, and not being so liable to run into those acetous fermentations, which occasion flatulence and pain in the stomach and bowels.

The quality and quantity of animal food must, in some measure, depend on the habits, occupations, and palate of the patient.

Salted meats should be used sparingly; beef and mutton, game and poultry (roasted or boiled), are articles that will agree with the majority of dyspeptic stomachs better than veal, lamb, or any other animal diet in the extensive catalogue of the larder.

Meat rather under-done, with the gravy in it, is not only more nutritious, and more easily digested, but a smaller quantity will be sufficient to allay the cravings of hunger: the stomach will not suffer from being overloaded, and the unpleasant feelings consequent on a full meal will be avoided. Rich-made dishes and sauces are injurious.

To white fish there can be no objection; but salmon, and other rich and oily fish, should be rejected.

Due attention being paid to the quantity and quality of the food, four or five hours should pass between each meal, that the process of digestion may not be disturbed. Thus, breakfast may be taken at eight or nine o'clock; luncheon at one; and dinner at

five or six. The luncheon should consist of one plain biscuit and a small glass of toast-water.

As a beverage, one tablespoonful of brandy, in half a pint of cold water, may be taken with the dinner, unless the patient should complain of acidity or heartburn; in that case, as soda water would be a corrective, it should be preferred, with or without the same quantity of brandy. If dinner be at six, supper is unnecessary, especially if tea be taken. However, the lighter the supper, the more pleasant will be the repose of the succeeding night.

Regular exercise in the open air must not be omitted.

The patient will require at least seven or eight hours rest in bed; nothing contributes to renovate the mind or body after fatigue more than repose; sleep, if not natural, should be induced by some gentle opiate.

It has been observed, that a total abandonment of former habits would be necessary: to this general rule there may be some exceptions. One individual abstaining from wine finds his spirits exhilarated, and perceives a daily improvement in his health; another becomes depressed and desponding, with loss of appetite, &c. In this case, the quantity of wine should be gradually diminished: but, at an advanced period of life, it would be imprudent to withdraw the stimulus, which long-continued habits have, in some degree, rendered necessary, without substituting brandy and water.

Agreeably to the plan laid down, each meal may be regulated; nevertheless, it is not presumed that this brief outline will suit every stomach; the human constitution is too variable to admit the indulgence of such a presumption.

Above all general rules, the patient's own experience will be, in point of regimen, his best physician; a careful attention to his feelings, after the use of different aliments, will teach him which to select, or to avoid.

When the bowels are brought into regular and daily action, the patient may return to the very moderate use of generous wine, and no longer confine himself to the strict regimen herein prescribed.

This outline is submitted not only to those who are suffering from dyspepsia, but likewise to those who, from present indulgence, may suffer hereafter. The latter have only to adopt a moderate regimen, and keep the bowels in regular action, to avoid all dyspeptic ills; the former, who are suffering from dyspepsia, require not only a temperate and strict regimen, but likewise the aid of such remedies as are known to strengthen the stomach and bowels.

Costiveness, the constant concomitant of dyspepsia, must be obviated; hence every medicine prescribed to renovate the energies of the stomach should, at the same time, act as a gentle aperient; for, although much must depend on attention to regimen, yet without the assistance of medicine the recovery would be protracted and doubtful. For the purpose of regulating the bowels, the anti-dyspeptic pill may be taken as the most effective in gradually restoring the energies of the stomach, and exciting a regular peristaltic motion of the bowels.

If the stomach has suffered from continued indigestion or overstimulation, the following draught should be taken two or three times a day:

Take of Compound infusion of gentian, ten drachms,  
Subcarbonate of soda, eight grains,  
Spirit of pimento, one drachm,  
Tincture of calumbo, one drachm.

Sponging the body with the nitro-muriatic acid lotion has been found to be of great use in the general debility of dyspeptics.

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## ITCH.

This disease is characterized by an eruption of pustules, or of small vesicles, which are subsequently intermixed with, or terminate in pustules: it is accompanied by constant itching, but not with fever, and is contagious. It usually appears about the wrist, fingers, arms, and thighs, but seldom on the head.

*Treatment.*—There are few complaints that have been treated with so many remedies, and none with so many pretended specifics, as the itch. The simplest and most certain cure is to be obtained from the use of the sulphur ointment, which should be well rubbed on the part affected every night till the eruption entirely disappears. The offensive smell of the sulphur ointment may be much diminished by adding a few drops of the essence of bergamot or lavender. The internal use of sulphur will, in all cases, assist the effects of its external application. Fumigation has also been much employed on the Continent for the cure of the itch. This is produced by throwing half an ounce of sulphur, mixed with two drachms of nitre, into a warming-pan of hot coals, which is to be used after the manner of warming a bed. The patient is then to strip, and get under the clothes, which are to be closely tucked round his neck and shoulders, to prevent as much as possible the gas from escaping. This process should be repeated for about

seven nights ; and Dr. Gale states, that even the worst cases may be cured in this way. These are the safest and most effectual applications, and should be employed whenever practicable.

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### JAUNDICE.

This disease comes on usually with languor, inactivity, loathing of food, disturbed sleep at night, acidities of the stomach and bowels, and a frequent sense of nausea. As it advances in its progress, the skin and eyes become of a deep yellow, there is a bitter taste in the mouth, the urine is very high-coloured, the stools are of a gray or clayey appearance, and a dull obtuse pain is felt in the right side, which is much increased by pressure.

*Treatment.*—An emetic at the commencement is often beneficial. Mercury in small doses, with the saline aperients, should be afterwards administered ; such as a five-grain blue pill, and a brisk purgative, in the morning. Plummer's pills should be occasionally given, with a course of mild bitters ; such as taraxacum, columba, gentian, &c., with saline aperients. If there is much pain, accompanied with fever, saline draughts and opiates should be prescribed. A generous diet (if the constitution will admit), cheerful company, and moderate exercise, especially riding on horseback, go very far towards effecting a cure of this disease.

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### MENSTRUATION.

Menstruation is a natural secretion, of a red colour, from the womb of every healthy woman who is not pregnant, or who does not give suck, bearing the name of menses, menstruation, &c., because it returns pretty regularly every month. Some women, however, have their courses every fifteen days ; others every two months, others at indeterminate times ; and lastly, a very few never have experienced this indisposition. Certain particular signs indicate the approach of the menses, such as a feeling of heaviness in the loins, lassitude in the limbs, pricking, and pain in the breasts, &c. Women are often subject to great irritability while menstruation continues ; the least noise alarms them ; they are affected by the smallest contradiction, and are very irascible.

The interruption of the menstrual discharge may be considered of two kinds ; the one, where the menses do not begin to flow at the period of life at which they generally appear, which is called

retention, and is frequently associated with chlorosis, or green-sickness; the other, where, after having made their appearance, they cease to return at their usual periods, from other causes than conception and the advanced change of life: this is called suppression.

*Retention of the Menses, and Chlorosis—Green-Sickness.*—The cause of this disease seems to be a debility or laxity of the constitution in general, and of the uterine system in particular. The general symptoms attending retention of the menses and chlorosis are pallid countenance, heaviness, pains in the back, loins, and hips, flatulency, depraved appetite, acidity in the stomach and bowels, with dyspepsia, costiveness, &c.

*Treatment.*—The cure of this disorder is to invigorate the system in general, and to excite the action of the uterine vessels. The first of these is to be effected by a generous nutritive diet, and a moderate use of wine; by regular exercise on horseback, cheerful society, and by a regular recourse to tonic medicines, as bark, myrrh, iron, &c., with the daily use of some chalybeate water. The second indication is best answered by walking, jumping, dancing, the warm-bath, heat applied by steam, or otherwise, to the region of the uterus, and by purging with aloes, scammony, &c.

*Suppression of the Menses.*—Any interruption occurring after the menstrual flux has once been established in its regular course, except when occasioned by conception, and the change of life, is always to be considered as a case of suppression.

When this suppression has occurred suddenly, and has been occasioned by exposure to cold, or some depressing mental emotion, a fit of anger, or any other similar cause, dry friction over the thighs, hot fomentations over the lower part of the belly, a warm bath, or hip-bath, and some aromatic warm drink, will generally prove of service.

For suppression of the menses, depending on excessive irritability, in a thin, nervous female, the most efficacious remedies are, cold bathing, or cold effusions, if the state of the constitution will admit of them, and corporeal exercises, such as gardening and walking, and aperients conjoined with antispasmodic drugs. About the period for the appearance of the menstrual discharge, it should be encouraged by the warm resinous purgatives, by the preparations of ammonia and guaiacum, or by fumigations of assafetida, directed towards the uterus, by means of an inverted funnel. Attention must be paid to secure regularity in the alvine evacua-



tion, and the infusion of gentian and senna, combined with myrrh, is the best purgative in the treatment of this disease.

*Dysmenorrhœa, or Painful Menstruation*, is a very common and distressing state, in which medical assistance is frequently solicited. The pain in the loins and abdomen is often in the highest degree acute, lasting two, or even perhaps three days. These painful symptoms admit of some relief from a small blood-letting, or cupping, the hip-bath, sitting over the steam of hot water, with other relaxing measures; and from the internal use of camphor, or of the preparations of ether, or of ammonia, with henbane, opium, &c.

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### PILES.

This disease consists in small tumours situated sometimes externally, sometimes internally, and sometimes on the verge of the anus. They are generally separate, round, and prominent; and sometimes the tumour consists only of one tumid or varicose ring surrounding the anus. A discharge of blood from these tumours, particularly on going to stool, distinguishes the bleeding piles from the blind piles, in which latter there is no discharge.

These affections may be occasioned by habitual costiveness, hard riding, excesses of various kinds, the suppression of some long-accustomed evacuation, and by a frequent use of aloetic or of drastic purges. Pregnant women are frequently afflicted with the piles, from the pressure of the gravid uterus on the pelvic veins, and from the costive habit to which such women are usually liable.

*Treatment.*—In attempting a cure of this complaint, our first attention must be directed to the cause, as far as we can ascertain it. If the bowels be habitually costive, gentle laxatives should be employed daily; and, where the complaint has been induced by excessive walking, or other muscular exertion, quiet and a recumbent position must be sedulously enjoined. The laxatives in either case may be the cassia or senna confection, with milk of sulphur or castor oil.

Take of Confection of senna,

Cassia, of each one ounce.

Milk of sulphur, two ounces.

Simple syrup, sufficient quantity to form an electuary.

Two teaspoonfuls to be taken night and morning.

Where the pain and tension are very distressing, relaxant cata-



plasms and fomentations are generally advisable. The common bread poultice, with a few drops of laudanum, is one of the best. Anodyne suppositories may be advantageously employed for the same purpose. If the tumours be much inflamed, leeches applied to them will be found an important remedy; and when this symptom is removed or mitigated, local tonics and astringents should be had recourse to. The patient may sit frequently on a bidet of cold water. An ointment of galls is often very useful, with opium to relieve pain.

When the constitution has become habituated to this disease, and the parts have suffered from its frequent occurrence, Ward's paste has been used with great benefit. Persons subject to piles have derived much benefit by chewing fifteen or twenty grains of the root of Turkey rhubarb every night on going to bed. Cooling lotions are sometimes required, such as half a drachm of white vitriol to half a pint of water.

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### PUTRID SORE THROAT.

This disease usually makes its attack with cold shiverings, anxiety, nausea, and vomiting, succeeded by heat, restlessness, thirst, debility, and oppression at the chest. The face is flushed, the eyes are red, and a stiffness is perceived in the neck, with a hurried respiration, hoarseness of voice, and soreness of the throat. Upon viewing the internal part of the mouth, there appears a fiery redness in every part, with a degree of swelling in the tonsils. This soon changes to a dark red, and becomes interspersed with a number of specks, of a shade between a light ash colour and dark brown. The tongue is covered with a thick brown fur, the breath is exceedingly offensive, and there is a general irritation or disturbance of the nervous system.

*Treatment.*—At the commencement of this disease, an emetic of ipecacuanha has been found of great service, by cutting short the progress of the disease. If the emetic should not operate on the bowels, half an ounce of Epsom salts may be administered, but both remedies should be employed with caution; for, should they produce violent diarrhœa, to which there is generally a great disposition, they will, by reducing the strength of the system, tend to accelerate a fatal termination. Blisters may be applied to the back of the neck, and the strength of the patient supported by strong broths, and wine with sago, according to circumstances. The carbonate, or compound spirit of ammonia (sal volatile), or compound tincture of bark, may be exhibited with the same

view. In conducting the cure of this disease, cleanliness, pure air, and a free ventilation, are of the utmost importance, and especially the cleansing of the fauces frequently with acidulated or antiseptic gargles. The Cayenne pepper gargle will answer the purpose extremely well; inhaling also the vapour of ether, or ammonia, rubbing the body with camphorated spirits, and taking acidulated drink, decoction of bark, a solution of chloride of soda, camphor, Mindererus's spirit, ether, and other diffusible stimulants. If the bowels become disordered, aromatics and astringents, with spiced wine and cordials, will be proper. The diet should consist of arrow-root, gruel, and the like, with wine or brandy. Bottled porter is frequently recommended, in consequence of the carbonic acid which it contains. Basins containing a solution of chloride of lime should be placed round the bed.

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### QUINSY.

(See *Inflammatory Sore Throat*.)

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### RETENTION OF URINE.

Retention of urine is often produced from the situation of patients preventing them from evacuating the bladder when it is demanded; and they continue to suffer until they are at liberty, and then the power of evacuation is lost. The bladder, from over-distension, becomes paralysed; and the sufferings of the patient go on increasing.

*Treatment*.—The majority of cases of this description arise from an enlargement of the prostate gland, and for their relief require the use of the catheter. They demand prompt assistance, and if relief be too long delayed, the consequences are most serious. Bleeding, warm fomentations, emollient clysters, mucilaginous drinks, light broths, &c., are to be resorted to according to the symptoms of the patient. The following mixture has frequently been employed with decided benefit:—

Three grains of camphor, and five grains of muriate of ammonia, made into an emulsion, with gum Arabic, and taken every two hours.

## RHEUMATISM.

This disease is distinguished into acute and chronic. The *acute* commences with the usual symptoms of fever, accompanied with pain, swellings, and redness of the joints, generally of the knees, hips, ankles, shoulders, elbows, and wrists, while the smaller joints of the toes and fingers are seldom affected. The pain, and sometimes the fever, is much increased in the evening.

Rheumatism may arise at all times of the year, when there are frequent vicissitudes of the weather; but the spring and autumn are the seasons in which it is most prevalent.

*Treatment.*—In the acute rheumatism the general antiphlogistic plan of treatment is to be pursued, so long as the febrile and inflammatory symptoms are severe. After freely opening the bowels with Epsom salts, rhubarb, castor oil, or calomel, the chief object is to endeavour to procure a general and mild diaphoresis, by giving James's powder, assisted by opium, or other narcotics, which may also alleviate the pain, and occasionally by the use of the warm or vapour bath, where the skin is particularly harsh and dry. The wine of colchicum prepared from the seeds and the root, in the dose of twenty to forty drops twice a day, in a wine-glassful of camphor julep, has been much extolled as a specific for acute rheumatism.

*Chronic Rheumatism* has as many, and nearly the same, varieties as the acute. It becomes fixed in the loins, in the hip, in the knee, but seldom in the chest. Its symptoms are in most respects like those of acute rheumatism, only that there is little or no fever: so that, while the general heat is very considerable, and the pulse usually upwards of a hundred strokes in a minute in the acute species, the skin in the chronic species seldom exceeds its natural temperature, and the pulse is rarely quicker than eighty beats; the joints are less swollen, and of a pale instead of a reddish hue, are cold and stiff, and roused with difficulty to a perspiration, and always comforted by the application of warmth. Every symptom of this form of rheumatism proves it to be a disease of debility, consequently the mode of treatment must be founded upon this idea. Hence stimulants of almost all kinds are found serviceable; such as the ammoniated tincture of guaiacum, the balsam of copaiva, spirit of turpentine, &c. Quinine and other tonics, warm-baths, vapour-baths, local applications, frictions continued for a quarter of an hour at a time, and afterwards with the ethereal opodeldoc, are resorted to by physicians of the present day. Whatever remedies are used, it will be absolutely necessary

to persevere with them for a considerable length of time, in order to obtain from them the desired advantage. According to Dr. Turnbull, the veratrine ointment has been used in all forms of rheumatism with decided success; but Dr. Copland and other authorities state, that they have been far from equalling the success of Dr. Turnbull in his employment of veratria. Chamois leather has been found an effectual means of preventing attacks of chronic rheumatism. A complete dress ought to be worn by those who are subject to this disease. The leather washes like linen; but it should not be washed in hot water.

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### SAINT ANTHONY'S FIRE.

(See *Erysipelas*.)

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### SCIATICA.

It is a fixed pain in the hip-joint, like the rheumatism, to which it is akin; it is also called the hip-gout. The pain takes the direction of the large sciatic nerve, the membrane enveloping which is in these cases somewhat inflamed or the blood congested. Cupping has therefore been found useful, and those means which have control over nervous pains in general. Blisters, nitrate of silver, veratrine, and various stimulating liniments have been found beneficial, and those medicines usually employed for the relief of chronic rheumatism are usually resorted to.

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### SCURVY.

Two centuries ago scurvy was a common disease throughout all the northern countries of Europe. The writers from whom we have derived accounts of it, agree in stating that it generally showed itself towards the end of winter, or in the early part of spring, and that it uniformly disappeared during the summer and autumn; but that it was at the close of long and severe winters, or when the country had been laid waste by war, and during long sieges, that its ravages were principally felt.

As agriculture and gardening improved, scurvy became gradually less frequent, and we have witnessed its almost complete extinction, on land, as the influence of these arts has extended to

the most remote parts of Europe, and to the humblest classes. But, even in recent times, there are instances in which, under the peculiar circumstances I have specified, it has produced disastrous effects on shore.

In the spring of 1795 it was very general among the French soldiers in the army of the Alps; and in 1801, during the siege of Alexandria, it prevailed among the inhabitants and garrison to a most frightful extent. During the siege, which was commenced by the English in May, and which lasted only till the end of August, 3,500 scorbutic patients were received into the military hospitals, which the French had established in that city. But it is not only in armies and during sieges that we meet with even modern instances of scurvy arising on land. In the reports of the inspectors of prisons for the years 1836-7, and 8, there is frequent mention of its occurrence in our gaols and prisons.

These examples are sufficient to show that scurvy is not peculiar to seafaring men; but it is, unquestionably, during long voyages that its fatal effects have been most felt, and its existence, as a prevalent disease, maintained.

The narratives of all our early navigators abound with descriptions of the frightful ravages of scurvy. Vasco de Gama, who first discovered a passage to the East Indies by the Cape of Good Hope, in 1497, lost a hundred of his men, out of a hundred and sixty, by this distemper.

Scurvy continued to prevail in all the fleets of England until the year 1795, when an Admiralty order was first given for furnishing the navy with a regular supply of lemon-juice, which had been long known to be a remedy for scurvy, and which some recent experiment had proved to be equally efficacious in preventing it. From this time we may date the extinction of scurvy in our own and foreign navies. It has, indeed, shown itself on several occasions since, especially in some of the expeditions for the discovery of a northwest passage; but it has prevailed only in a slight degree, and has almost always been suppressed by an additional allowance of lemon-juice.

*Symptoms.*—The first indication of the approach of scurvy is generally a change in the complexion, which loses its healthy tint, and becomes pale, slightly sallow, and dusky. This change is attended with lowness of spirits, and with aversion to any kind of exercise, which quickly induces fatigue: and the sailor complains of pains, especially in the legs and loins, like those produced by over-exertion.

The gums soon become sore, and bleed on the slightest touch. On examination, they are found to be swelled and spongy, and of

a dark red colour, especially at their edges, where they are in contact with the teeth.

Purple spots appear on the skin, particularly of the legs and thighs; but often, also, on the arms and trunk. These spots, which are sometimes very numerous, are generally small and circular, resembling flea-bites; but often, especially when the disease is a little advanced, we meet with other spots as large as the palm of the hand, sometimes much larger, in which the skin is of a variegated violet and green tint, and which resembles in every respect the marks produced by a severe bruise. These bruise-like marks occur without the infliction of any blow, or at least, of one sufficient to attract the sailor's attention, and often surround an old scar, or appear on a part which a long time previously has been the seat of some injury.

In advanced stages of the disease, the complexion has a more dingy, and somewhat brownish hue: the gums are more swelled and more livid, forming in some cases a black spongy mass, which completely covers the teeth; the teeth themselves become loose, and frequently drop out; and the debility is such, that the slightest exertion, even the erect posture, causes breathlessness and palpitation, and not unfrequently an alarming faintness.

*Treatment.*—The essential point is to give, in sufficient quantity, those articles of vegetable food which have been distinguished for their antiscorbutic qualities. Oranges, lemons, or fruits of that class, if they can be procured, should be preferred. The salutary effect of them is extraordinary, and such as would scarcely be imagined by persons who have not witnessed it.

If the state of the gums be such as to prevent the patient from masticating, he should be kept, for two or three days, on milk diet or on soups, in addition to the antiscorbutics; at the end of this time, or at the commencement, if the case be less severe, his diet should consist of fresh animal food and vegetables, especially in the form of salads; and, as long as he continues very feeble, wine, porter, or ale, should be given.

This is all the treatment required for the cure of scurvy.

Bleeding should never be had recourse to, although feverishness or severe pain may seem to render it advisable. It always produces ill effects, and, in advanced stages of the disease, persons do not survive it.

Blisters are apt in scorbutic persons to produce mortification, and for this reason we should abstain from their employment.

Mercury, in every form, should be scrupulously avoided. In



every instance it aggravates the disease ; and very small quantities have been known to produce a dangerous salivation.

As in a subject like the present, particular examples are more impressive than general statements, I have subjoined the details of a case which occurred during the course of the past year. This case is certainly the worst I have ever met with ; but I have chosen it, not on this account, but from its being well adapted to show the circumstances which have the chief influence in producing scurvy.

A vessel sailed from England on the 26th of August, and arrived at the Mauritius on the 1st of December ; she again set sail for England on the 17th of the January following, and entered the port of London on the 1st of June. The crew were healthy when they left the Mauritius, and consisted of sixteen persons, of whom eight were before the mast, and formed one mess ; the cook, carpenter, second mate, and boatswain, another mess ; the captain, the first mate, the owner's nephew (a boy), and the steward, formed the remainder of the crew. Of the eight men before the mast, four died during the passage home, one, near St. Helena, of dysentery, and three, after passing the line, before their arrival in this country, of scurvy. Of the remaining four, three were brought to the Dreadnought (Hospital Ship) soon after they arrived in port, the fourth was taken to his friends ; all these were in a dreadful condition from scurvy, but they all recovered, with the exception of one who died soon after he was brought to the Dreadnought. Of the four who formed the second mess, one was brought to the Dreadnought, the others went to their homes ; all were in a very bad condition. Scurvy showed itself in these men about six or seven weeks after they left the Mauritius, and all of them, except two, had been confined to their hammocks since the latter part of April : of these two, one had been confined to his hammock only ten days ; the other, though incapable of doing duty, continued to crawl about until they arrived in port. For ten days before their arrival, the vessel was worked entirely by the captain, steward, first mate, and boy, who messed together in the captain's cabin, and continued free from scurvy. The weather, during the voyage homeward, was fine ; the vessel, a good one ; and the work of the men before they became affected with scurvy, was not severe. Their diet, after they left the Mauritius, consisted of salt beef or pork, with biseuit, and tea, for breakfast ; beef two days, and pork one day, alternately, with biseuit for dinner ; and during the first half of the voyage, flour, in puddings, twice a week, and pea-soup twice a week. One glass of grog was given daily to each man nearly all the passage. They had no



vinegar, lemon, or lime-juice. The salt provisions were of bad quality, but not of the worst; and the diet was as good in every respect in coming home as in going out, yet none of the crew showed any symptoms of scurvy in their passage outward. While in the Mauritius, each man had two pounds of fresh beef, daily; but no fruits or vegetables of any description.

I have since met with an instance in which the crew of a vessel, likewise from the Mauritius, were reduced by scurvy to a condition almost as bad as in the case of which I have given the details. In both instances the disease was owing, in part, to the want of lemon or lime-juice during the voyage; in part, to the circumstance, that, while they remained at the Mauritius they were unprovided with fresh vegetables or fruits.

The points which I have endeavoured to establish in the preceding pages, are

1st. That scurvy, which for a long time has been almost unknown in the navy, is still very common in the merchant ships of this country, especially in those trading with the Mauritius, Australia, China, and the different ports of India.

2d. That the symptoms by which this disease may be recognised, are—a pale, sallow, dusky complexion; a listless, desponding manner; swelled and spongy gums, of a dark red colour, and apt to bleed on the slightest touch; purple spots and bruise-like marks, particularly on the legs; and swelling and hardness of the calf or ham, with stiffness and contraction of the knee joint.

3d. That scurvy is not attributable to the use of salt meat, to sea air, or to any marine agency, but that it is occasioned by prolonged abstinence from succulent vegetables or fruits, or their preserved juices, as an article of food; and that by the use of these it may be prevented or cured.

4th. That probably all succulent vegetables and fruits, which are wholesome, are more or less antiscorbutic; and that generally those which are the most succulent are the most efficacious.

5th. That the antiscorbutic property resides in the juices of the plant, and that is in some degree impaired by the action of a strong heat; and therefore, the juices of fruits, as lemons, limes, apples, for sea use, should be kept good by the addition of a certain proportion of spirit, without the aid of heat. That vegetables, for the same purpose, should be preserved in the form of pickles, as in the preparation of *sour-kROUT*.

6th. That no vessel should be sent on a voyage of several months' duration, without a supply of lemon or lime-juice (see *Lemon Juice*); and that on the arrival of a vessel in port after a

long voyage, the captain should, if possible, provide his men with fresh succulent vegetables or fruits.

G. BUDD.

In addition to what has been already said on the treatment of scurvy, we subjoin Dr. BEAUMONT'S table of the mean time of the digestion of different kinds of meat.

Meats.	Hours.	Minutes.
Venison steak, broiled . . . . .	1	35
Tripe . . . . .	1	0
Pig's feet . . . . .	1	0
Sucking pig, roasted . . . . .	2	30
Lamb, broiled . . . . .	2	30
Beef steak, broiled . . . . .	3	0
Pork steak, broiled . . . . .	3	15
Mutton, broiled . . . . .	3	0
Veal, broiled . . . . .	4	0
Salt Beef, boiled . . . . .	4	15

(Extracted from Coxe's Companion to the Sea Medicine Chest, in which it was introduced by permission of Dr. Budd from his treatise on Scurvy.)

## SEA-SICKNESS

Is a nausea, or tendency to vomit, which varies in respect to duration in different persons upon their going to sea. The means resorted to for the relief of this troublesome and distressing affection are the following :

Perfect rest in the recumbent position, exposure of the body to the cool and fresh air on deck, instead of going into the cabin or between the decks, draughts of weak spirit and water; but the best remedy is a teaspoonful of sulphuric æther in a glass of Sherry wine.

Strong impressions made on the mind, such as an alarm of fire on board, or danger of shipwreck, are capable of arresting the progress of this complaint.

Camphorated spirit, sal volatile, and Hoffmann's ether, a few drops of each, mixed in a small quantity of water, or upon a small lump of sugar, have frequently afforded relief. Sea-sickness is considered to be of service in asthma and consumption.

## SICKNESS.

Sickness of stomach occurs under three forms,—nausea, retching, and vomiting.

Nausea is a tendency to vomit, but there is no rejection; it lowers the pulse, contracts the small vessels, occasions cold perspirations, severe rigors and trembling, and diminishes the action, and even the general powers of life. The act of retching, and vomiting more especially, on the contrary, rouses rather than depresses, puts to flight all the preceding symptoms, and often restores the system to itself.

*Treatment.*—The best palliatives against nausea and vomiting are effervescing saline draughts, and small doses of opium. Lemon ice, or very cold lemonade, is often serviceable, and more especially if mixed with mint tea. When the stomach is overloaded, or irritated by bile, or any other material that sits uncasily, the offending matter must first be discharged, and then the stomach restored to its proper tone and action by some aromatic cordial, or, if necessary, by narcotics. Food should at first be given in the smallest quantity, and of the lightest kind. A little toast-water alone, taken in small sippings, or a small spoonful of brandy, mixed with some thin arrow-root, will often sit easy when nothing else will remain. When sickness proceeds from a chronic debility of the stomach, the infusions of orange-peel, cascarilla, or calumbo, with sal volatile, will be found useful. Vomiting is a very common attendant during the early stage of pregnancy; and as it generally arises upon first getting out of bed in the morning, the patient should be recommended, under such circumstances, never to rise until she has taken some tea, coffee, or whatever else she has usually accustomed herself to for breakfast. If the vomiting should become so severe as to threaten a miscarriage, a saline draught, with a few drops of laudanum, may be serviceable; besides which, the bowels should be kept open with some gentle laxative. If these means do not succeed, bleeding from the arm will be necessary.

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SMALL-POX.

This is a highly contagious eruptive fever, which usually occurs but once during life. It commences with languor, drowsiness, pain of the head and loins, vomiting, and soreness of the stomach on pressure. On the third day, generally, there appear, first on

the face, and successively on the inferior parts until the fifth day, small red spots gradually rising into pimples, which fill with puriform matter, afterwards dry into hard scabs, and, on falling off, frequently leave pits and marks in the skin. (The vesicles of small-pox are distinguished by being round, and having a depression in the centre.) Small-pox is divided into the distinct and confluent. In the former, the pustules are few, detached, circular, and turgid, having rose-coloured bases, accompanied with inflammatory fever, which abates considerably on the eruption taking place, and goes off almost entirely on its completion. In the confluent form of the disease, the pustules run much into one another, the fever is more violent, and of a low or typhoid character, and sometimes attended with coma and delirium. About the third or fourth day the eruption usually makes its appearance, being frequently preceded by, or attended with, a rosy efflorescence, similar to measles; but the fever, although it suffers some slight remission on the coming out of the eruption, does not go off as in the distinct kind; on the contrary, it becomes increased after the fifth or sixth day, and continues considerable throughout the remainder of the disease.

*The treatment* of small-pox will necessarily be different, as the disease is of the distinct or confluent kind, and according to the changes which take place in its successive stages. In the distinct form we should endeavour to moderate the violence of the inflammatory symptoms by vomiting, provided there be no material tenderness of the stomach, by purging, antimonials, and saline diaphoretics, application of cool air, vegetable diet, subacid drinks, and a strict observance of the antiphlogistic regimen. In the confluent state, after evacuating the bowels with some mild aperient, and employing other means to moderate the fever, we should endeavour to support the powers of life by giving quinine or the preparations of bark, especially the decoction, with muriatic acid, or the infusion with spirit of Mindererus, or with the alkaline carbonates, or the preparations of ammonia or of camphor. But in all cases of this form of the disease, the advice of an able physician should be procured without delay, as the treatment requires to be varied according to the peculiar features of individual cases, and the different stages and states of the malady.

Cases of small-pox, since the introduction of vaccination, are now of rare occurrence, and when they do occur after vaccination, are usually shortened in their duration and imperfect in their development.

## TIC DOULEUREUX

Is a painful affection of a nerve, so called from its sudden and momentary excruciating stroke; it generally occurs in the nerves of the face, and is the most distressing disease to which the human frame is subject. The character of the pain is very peculiar, and its course corresponds exactly with that of the nerves. The disease has been occasionally mistaken for rheumatism and toothache; but the brevity of the paroxysm, the lancinating pungency of the pang, and the absence of all inflammation, will always be sufficient to distinguish it from every other kind of pain.

*Treatment.*—When the state of the stomach permits their exhibition in small doses, narcotics may be useful, such as acetate of morphine, extract of henbane, hemlock, opium, belladonna, &c.; the prussic acid in very small doses, and the carbonate of iron in doses from one scruple to two drachms thrice daily, have been sometimes successful. Bark and sulphate of quinine have also been tried with various results. Frictions with ether, laudanum, camphor liniment, or tincture of cantharides, are also much used. The veratrine ointment, according to Dr. Turnbull, has been employed with decided benefit. Dr. Sigmond related, at the Westminster Medical Society, some cases of cure by sulphate of quinine taken in the form of snuff. Small blisters, made along the course of the nerves with a grain or two of veratria, repeating the operation every three or four days, have been reported successful in the treatment of this disease. (The strong tincture of aconite, applied to the painful spot, sometimes gives instant relief.)

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 TOOTHACHE.

The toothache often assumes a variety of different appearances, and is frequently brought on by cold or sitting in currents of air, in consequence of the decayed state of some part of the tooth, by which the nerve may have become exposed; it is also frequently occasioned by indigestion. In either case, in any serious attack of this complaint, aperient medicines will often be found the most efficacious mode of treatment. In cases of toothache arising from cold, particular attention should be paid to keeping the feet warm and dry. If the tooth be hollow or decayed, apply the compound tincture of benzoin, creosote, or some essential oil, upon cotton, to the part, or pills with camphor and opium, or chew the root of

pellitory of Spain. If there be inflammation, apply a leech to the gum, and give some aperient medicine. If it proceeds from cold or rheumatism, treat it as directed for those complaints. When caries is complete no remedy remains but extraction of the tooth.

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## TYPHUS FEVER.

The disease is likewise named putrid, pestilential, hospital, camp, and prison fever, from its appearing so frequently in such situations; and when attended with purple or flea-bite spots, petechial or spotted fever.

Typhus fever generally commences with languor, dejection of spirits, amazing depression and loss of muscular strength, pains in the head, back, and extremities, and rigors; the eyes appear full and heavy; the tongue is covered with a brownish-coloured mucus, which soon becomes dry and parched; the proper taste is lost, the breath is offensive and hot, the bowels costive, the urine pale, the pulse frequent, small, and hard. There are sometimes a great load, feeling of heat, and oppression of the stomach, and not uncommonly bilious vomitings. Low muttering delirium, with stupor or lethargy, supervenes in unfavourable cases, and often with involuntary movements and unconscious evacuations.

*Treatment.*—The most proper remedy at first, at the commencement of the disease, will be an emetic of about twenty grains of ipecacuanha with one grain of tartarised antimony (emetic tartar). After the operation of the emetic, the bowels may be opened with a few grains of calomel and compound extract of colocynth. Should the bowels not be acted upon by the aperient medicine, a clyster may be administered. Throughout the course of the disease, the patient, in no case, should be more than two days without a stool, as costiveness is apt to induce an increase of heat and affections of the head, as delirium, &c. If the surface of the body is dry, and hotter than natural, cold affusion or sponging will be highly beneficial, unless the patient complains of its being disagreeable to his feelings, or some pulmonary affection contraindicates its employment. If, on the other hand, the disease is marked with prostration of strength, a feeble pulse, and embarrassment of the vital functions, it will be necessary to sustain the powers of life by stimulants, as wine, bark, &c.; these, with the solution of the chloride of soda, or lime, taken internally, sponging the surface of the body with the same liquid, or with vinegar and water, will be the principal measures to be resorted to. Should



vomiting or diarrhœa occur during the progress of this disease, the former will generally cease on taking ten or twelve grains of magnesia in a little peppermint water, the latter by a few grains of mercury with chalk, or the chalk mixture with Dover's powder. Whatever is given to the patient for drink ought to be cold, and gently acidulated with the juice of oranges or lemons. The viscid phlegm, which collects about the tongue and teeth, should be scraped off by a knife, or be wiped away with a piece of lint or sponge dipped in a weak solution of chloride of soda. The prevention of typhus ought never to be neglected; besides fumigating the apartments, the clothes, bed, bedding, &c., should be well sprinkled with chloride of lime, paying the strictest attention to cleanliness in every respect, obliging those in health, as well as those tainted by the contagion, to undergo daily ablution with cold water.

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### VOMITING OF BLOOD.

This species of hæmorrhage may be induced by anything received into the stomach which stimulates it violently, or causes a breach of structure; it also arises in females from a suppression or retention of the menstrual secretion. It is readily distinguished from hæmorrhage from the lungs, by its being usually preceded by a sense of weight, pain, or anxiety, in the region of the stomach; by its being unaccompanied by any cough; by the blood being discharged in a very considerable quantity; by its being of a dark colour; and by its being mixed with the other contents of the stomach.

*Treatment.*—If the patient be of a plethoric habit of body, and the symptoms indicate an inflammatory condition, it will be necessary to take away a small quantity of blood from the arm. If he be of a weakly or leucophlegmatic habit, loss of blood will be improper. Should the hæmorrhage still continue, powerful sedatives and astringents, such as digitalis, sugar of lead, or acetate of zinc, may be given with good effect; and when the hæmorrhage has ceased, the decoction of bark, with diluted sulphuric acid, may be prescribed with advantage. The bowels should be kept in a soluble state by the occasional use of Epsom salts and infusion of roses. If the patient complains much of pain or heat in the region of the stomach, a blister should be applied thereto without delay.

In every case it will be advisable, after the flow of blood has



been checked, to guard against its return by a careful regimen, and by continuing, for a considerable time, to take acidulated and astringent fluids.

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### SPITTING OF BLOOD.

When this hæmorrhage is slight, and consists simply in the expectoration of bloody sputa, without any other symptom, it may in general be easily checked by simple means. A small quantity of blood should be taken from the arm, and the patient's diet restricted to mucilaginous, acidulated, and slightly astringent liquids, containing nitre, or small doses of prussic acid. These remedies will usually be sufficient, especially if an antiphlogistic regimen is observed, and the patient avoids conversation and walking about. When the spitting of blood is intermittent, that is, returns at regular periods, bark, or the sulphate of quinine, in infusion of roses, will be most useful. If the bleeding is considerable, astringents should be used; viz.:

Powdered dried alum, eight grains,  
Catechu, ten grains,  
Confection of roses, sufficient to form a bolus,

which may be taken every four hours, drinking after it some infusion of roses.

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### WARTS.

Warts may be destroyed by ligatures, the knife, escharotics, or powerful astringents. Many of the common pungent plants are employed by the people for the same purpose, and, in various instances, answer sufficiently. One of the most frequent is the celandine, whose yellow acrid juice is applied to the excrescence daily or occasionally till it disappears. The pyroligneous acid, the liquor potassæ, or ammonia, or the mineral acids, answer the same purpose. In Sweden they are destroyed by the wart-eating grasshopper. The common people catch it for this purpose; and it is said to operate by biting off the excrescence, and discharging a corrosive liquor on the wound. They often disappear spontaneously, and hence are sometimes supposed to be charmed away. All these applications, however, destroy warts less speedily and less certainly than the daily application of strong nitric acid, sur-

rounding the part with a piece of diachylon plaster, to preserve the healthy skin from the action of the escharotic. When warts are situated on a joint, or on one of the lips, or on the eyelid, it will not be prudent to use any caustic application, unless under the direction of a skilful surgeon.

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### WATER-BRASH.

This disease is most frequently to be observed amongst the poor; but sometimes, though rarely, in persons of more fortunate conditions in life. The paroxysms of water-brash usually come on in the morning and forenoon, after food has been abstained from for some hours, with a burning pain about the upper part of the stomach, which is often very severe; and, after continuing for some time, is followed by an eructation of thin fluid, varying in quantity, but in appearance always resembling water.

*Treatment.*—The compound decoction of aloes; combinations of the powder of rhubarb, with magnesia; the compound tinctures of rhubarb and cardamoms, and peppermint-water; the powder and compound tincture of rhubarb, with carbonate of ammonia and camphor-julep; combinations of the vegetable tonics, with aromatics, and large doses of alkalies, have all been recommended for this disease; but the *Absorbent lozenges* appear to afford more relief than either tonics or bitters. The use of opium has succeeded in some cases where all other means had proved useless; (and the oil of amber in doses of ten drops often affords immediate relief).

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### WEN, OR GOITRE.

This disease consists of a tumour on the forepart of the neck, formed by an enlargement of the thyroid gland. The tumour is very gradual in its progress, and often commences in females about the age of puberty. It is most prevalent amongst the inhabitants of mountainous districts, and countries bordering thereon.

In the incipient state, this disease will generally yield to the exhibition of burnt sponge internally, in doses of ten grains to half a drachm three times a day, and the use of camphorated mercurial ointment, applied by means of gentle friction externally. The form under which the burnt sponge is most usually exhibited,

is that of a lozenge. Preparations of soda, potash, and iron, the muriate of barytes, and lime, have also been much recommended.

Of all the medicines, however, which have been administered for this disease, the substance called iodine is unquestionably the most efficacious. The formula recommended by M. Coindet is that of an ointment composed of half a drachm of hydriodate of potash mixed with an ounce and a half of lard, of which a drachm should be rubbed in over the surface of the swelling, morning and night. The tincture of iodine may be taken in doses of fifteen to thirty drops, three times a day, in some distilled water.

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### WHITLOW.

This disease is a very painful inflammation at the extremity of one of the fingers, or at the root or sides of the nail, slowly, but almost certainly, terminating in the formation of an abscess. Sometimes it extends gradually upwards to the hand, or even to the wrist.

Whitlows frequently arise from external causes, as bruises, pricks of needles, the lodgment of thorns, or bits of broken glass, &c., but still more commonly without any manifest cause, in which case it is probably connected with a bad habit of body.

*Treatment.*—The extent and violence of whitlows may be checked by applying to the part affected, in the early stage of the complaint, leeches and astringent applications, and having recourse to other antiphlogistic means. In the severe cases, where the swelling reaches up to the arm, and the fever is considerable, venesection should be freely practised, aperient medicines given, opium exhibited, cold lotions applied, and leeches repeatedly used. When these plans fail, and the increase of the swelling and pain denotes the impossibility of preventing an abscess, poultices and fomentations are to be employed, until the matter admits of being discharged by a free incision. When the inflammation is somewhat abated, common dressings are to be substituted for poultices, and where a fungous excrescence appears, which is common in these cases, caustic must be applied and the part protected against the edge of the nail.

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### WHITES, OR FLUOR ALBUS.

The disease is marked by the discharge of a thin white, or yellow matter from the uterus and vagina, attended with some degree

of fœtor, pain in the back and loins, loss of appetite and emaciation, languor, and depression of spirits. Fluor Albus is the effect both of relaxation and inflammatory excitement. Frequent misearriages, difficult and tedious labours, immoderate flowings of the menses, poor diet, an abuse of tea, and other causes, giving rise to general debility, are those which usually produce this discharge.

*Treatment.*—When this disease arises from general debility and relaxation, preparations of bark, iron, the mineral acids, and astringent bitters should be exhibited; a combination of calomel and alum has been employed by Mr. Pettigrew, in many cases, with the greatest advantage. A generous and nutritive diet, gentle and regular exercise, cold bathing, or the local application of cold water, by means of a bidet, used every morning, provided the patient be free from cough, or difficulty of breathing, and not subject to giddiness, or a determination of blood to the head, will prove of service. If the discharge continue after the due employment of these means, injections of alum, oak-bark, nitrate of silver, sulphate or acetate of zinc, together with partial cold bathing, and frequent ablution of the parts, may be resorted to with advantage. But care should be taken to ascertain whether inflammatory irritation exist about the uterus; and, if it be present, to remove it by suitable treatment and regimen before we have recourse to these means.

# INFANTILE DISEASES.

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## APHTHOUS ULCERATION, OR THRUSH.

THIS complaint is generally called the baby's sore mouth; it consists of a greater or less number of white pustules on the inside of the mouth. It very generally begins on the inner part of the lower lip, or corners of the mouth, and resembles a small coagulum of milk; from this point it sometimes spreads itself very rapidly over the inside of the cheeks, tongue, and gums.

The bowels are usually deranged when aphthæ are present, being costive, and the secretions vitiated, or the alvine discharges are frequently so acrid as to excoriate the verge of the anus very severely, especially when due attention is not paid to cleanliness, or to the frequent changing of the diapers. The stomach is also much deranged, sometimes vomiting the milk as soon as it is received.

*Treatment.*—When this disease is merely a local affection, it may be often quickly removed by local means alone; but in most instances attention must be paid to the general state of health, particularly the condition of the bowels; and a mild laxative will in some cases at once remove the disease. When the bowels are merely costive, a dose of castor oil will be sufficient for this purpose; but when acidity of the stomach, or derangement of the secretions is, in addition, present, we must have recourse to the following mixture:—

Take of  
Powdered rhubarb, one scruple.  
Calcined magnesia, two scruples.  
Cinnamon powder, ten grains.  
Mix.

R  
Pulv. rhei ℥j.  
Magnesiæ calcin. ℥ij.  
Pulv. cinnamomi gr. x.  
Misce.

Five grains of this powder may be given to a child six months old.

Should the bowels continue much relaxed, and attended with much pain, half a drachm of syrup of poppies may be added to each dose of the above mixture, and a drachm of the prepared chalk substituted for the rhubarb.

The best local application is equal parts of powdered borax and loaf sugar: a small quantity of this mixture dissolved should be thrown into the mouth, and repeated every two or three hours.

During the continuance of this complaint the most scrupulous attention should be paid to cleanliness, and the child, when practicable, should be confined to its mother's milk, and the mother should avoid such diet as would become ascenseent on the stomach.

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### CHICKEN OR SWINE POCK.

The eruption termed chicken-pox is sometimes preceeded by chilliness, succeeded by flushings and heat, pains in the head and back, thirst, restlessness, and a quick pulse; but at other times no such symptoms are perceptible. The vesicles quickly suppurate and scale off, and a succession of the pimples appear, perhaps for three or four days, going off in the same manner. These eruptions are considered of so trivial a nature as scarcely to require any medical assistance. To keep the bowels moderately open by gentle doses of rhubarb and magnesia, and the surface of the body clean by frequent ablutions in warm water, is all that will be necessary. Should, however, the febrile symptoms run high, small doses of antimonial or James's powder, with saline draughts, should be administered.

### CHOLERA, INFANTILE.

This is a disease of a very formidable character, and requires the aid of the physician without loss of time. In some instances, it comes on as a simple diarrhœa, though the stomach is also very apt to be affected; and in its more violent forms there are vomiting and purgings, attended by no inconsiderable spasmodic uneasiness, constituting the cholera morbus of further advanced life.

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### CONVULSIONS.

Convulsions are not, generally speaking, so dangerous an affection as might be at first imagined. Very young infants are liable

to a spasmodic affection, to which nurses give the name of *inward fits*. The infant smiles often in its sleep, and rolls about its eyes; the mouth being occasionally drawn down, with slight twitchings of the lips, and at times there is some surrounding blueness.

Convulsions frequently come on without any previous warning, or there being any derangement in the child's health, to account for the attack. Generally they occur in children who are in delicate health, and very slight causes will occasionally induce an attack, as any sudden fright, the irritation of teething, pain, flatulency, constipation, the ingestion of bad food, worms, &c., &c. They often also attend diseases of the brain, and usher in the eruptive fevers.

*Treatment.*—The cure of convulsions will consist in removing the exciting causes. If from improper food and indigestion, a gentle emetic should be given. If the irritation be in the bowels, a few grains of gray powder with rhubarb may be given with propriety. But if the disposition to convulsions continues, after the bowels have been properly cleansed, and the child appears exhausted, a few drops of sal volatile or tincture of assafoetida should be administered. If worms are considered to be the cause of convulsions, the cure must then depend on the proper treatment of that complaint. If from teething, after gentle evacuations, lancing the gums should be resorted to. The dress of the child should be loosened, the head elevated, cold air admitted, and the face sprinkled with cold water. As they often attend dangerous affections of the brain, the advice of a physician should be immediately obtained.

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### COSTIVENESS.

Costiveness is either constitutional or accidental. The bowels of infants may become costive from improper food, or food which in itself may be proper in some constitutions, yet may produce costiveness in others. Thus rice in all its preparations will sometimes make the bowels of some children tardy. The most proper cathartic medicine for children is castor oil, or magnesia. The quantity of either must be proportioned to the age and habit of the child; from a teaspoonful to a dessert-spoonful of oil will be a dose for children from a month to three years old; of magnesia, from one to two large teaspoonfuls will be doses for the same ages. Manna may also be used with the child's food.

But should costiveness appear to have provoked fever, excited convulsions, or induced much pain, more active medicines, such as



jalap or calomel and jalap, should be administered. The basilio powder is a very useful medicine in cases of constipation of infants. Accidental costiveness is frequently caused by nurses giving Godfrey's cordial, syrup of poppies, or laudanum, in order that they may secure some rest for themselves, a practice that cannot be too severely reprehended.

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### COW POCK.

If the matter for communicating this disease be genuine, and the infant at the time of inoculation be free from any disease of the skin, the following appearances will take place. On the third day (the day of inoculation being reckoned the first) a small red spot, like the bite of a gnat, appears on the infected part. In six days a small vesicle will be formed, which, on the eighth, becomes circular, and surrounded by a circle of a reddish colour. On the ninth day the vesicle is as large as a pea, and surrounded by a red ring. On the eleventh the vesicle begins to seab, grows dry, and turns black in the middle, and the ring becomes more extended. On the fifteenth day the poek becomes a seab, of a blackish or dark mahogany colour, and the red ring or margin disappears. On the twentieth day the seab falls off; and a cicatrix, of a honeycomb appearance, remains in its place. During this time the part should be defended from the friction of the linen by a little goldbeater's skin; and if the surrounding inflammation should run high, the following lotion should be applied:

Take of Goulard's extract, ten drops.  
Distilled vinegar, two drachms.  
Laudanum, thirty drops.  
Distilled water, eight ounces.

To be mixed together, and applied, by means of folds of fine linen, over the affected part.

During the progress of the cow poek, little or no medicine is required. After the vesicle begins to seab, a dose or two of a mild purgative, as castor oil, or rhubarb and magnesia, will be necessary.

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### CROUP.

This disease is an inflammation of the larynx and windpipe, and is distinguished from other sore throats by a laborious inspiration,

sounding as through a brass tube ; a harsh dry cough, with seldom any tumour in the throat, and no difficulty in swallowing. It is dangerous from the suddenness of the attack and the rapidity of its progress, and requires the most prompt and decided measures to prevent suffocation.

*Treatment.*—On the first appearance of croup, a dose of ipecacuanha and antimonial wine, or a teaspoonful of the following mixture :—

Ipecacuanha wine, half an ounce,  
Tartar emetic, one grain,  
Distilled water, half an ounce,  
Mix,

should be immediately given, and repeated every ten minutes, until it excites vomiting. After its operation the child should be put into a warm bath, from ten to fifteen minutes, and a dose of calomel and James's powder given. If relief be not obtained from these measures, the entire throat should be covered with leeches, say eight or ten, and the bowels emptied by the following turpentine injection :—Take of common turpentine two drachms, beat it up with the yolk of an egg, and add by degrees half a pint of decoction of chamomile flowers, in which an ounce of Glauber salts has been dissolved ; strain it, and divide it into two equal parts ; one of which is to be administered night and morning. If the alarming symptoms are not checked in twelve hours, the warm bath is to be repeated, and calomel, in doses of from three to five grains, with three grains of James's powder in each, should be given every third hour. If a child recover from the attack of croup, every affection of the chest or lungs should be considered as important ; it should, therefore, be carefully guarded against cold, especially in damp weather, for which purpose the child should wear a chamois leather waistcoat next its skin, made to cover the neck, and great attention be paid to the stomach and bowels. A child having been once attacked with croup is very liable to its return from any slight exposure to cold.

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### DIARRHŒA.

Children under two years and a half old are especially liable to this complaint. Diarrhœa is almost always attended by some sickness of stomach and griping, the pain usually following the contents of the bowels as they pass along. This disease is generally brought on by overloading the stomach with food ; by the

irritation of worms; by teething; or by injudiciously repelling cutaneous eruptions. Unripe fruits are not unfrequently the cause of bowel complaints; and as children have in general a wish to eat them, some caution is necessary to prevent this source of disease; the same caution should also be used by the nurse, in using sour fruits or acid drinks.

*Treatment.*—When the bowels of a child are affected by purging, arising from any of these causes, a dose of castor oil, or the following mixture, should be given:—

Take of Powdered rhubarb, one scruple.  
Calcined magnesia, two scruples.  
Powdered cinnamon, ten grains.  
Dillseed water, two ounces.

Mix.

Dose—One or two dessertspoonfuls may be given to a child six months old.

Should the purging continue, and blood appear in the discharge, a drop or two each of laudanum and of ipecacuanha wine may be given in some cinnamon water, or chalk mixture, and the child put into a warm bath.

During the continuance of this disease, the child should be more warmly clad than usual, unless the weather is very warm, and its feet should be covered with socks both by day and by night.

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## SORE EARS.

Slight blisters and ulcerations behind the ears of infants are very common during teething, and in general require only to be washed with cold water, or covered with a singed rag to keep the cap from sticking to them, and thereby giving the child pain. Should the child be in the habit of scratching the sore parts, a piece of fine rag spread with simple cerate may be laid behind each ear. If the sore be very much inflamed, and very irritable, a soft poultice of bread and milk should be applied, every four or five hours, until these symptoms are abated. These sores are often beneficial, especially during bowel complaints, or teething, and will sometimes get well and break out again into very foul ulcers, several times, without any cause of alarm. A dose of gray powder, either alone or mixed with rhubarb, will perhaps be required, particularly if the bowels are inclined to be costive.

## ABSCESS WITHIN THE EAR.

Fœtid discharges from the internal ear, either with or without inflammation, and attended with external soreness, are very prevalent in children of one or more years old. A little cooling medicine, and washing out the matter frequently with a little warm water, will be, perhaps, all that is required; but should this not remove the complaint, a few drops of warmed oil of almonds may be instilled into the ear on going to bed. The child should also be made to lie as much as possible on the affected side, that the discharge may have a free vent.

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## RED GUM.

This complaint often appears in the healthiest children, and being attended by no constitutional derangement, no medical treatment is demanded; unless, indeed, under the feeling that it is right to attend to the stomach and bowels, we should be disposed to give the child a few grains of magnesia, or a few drops of sal volatile in some dillseed water.

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## HICCUP, OR HICCOUGH.

A spasmodic affection of the diaphragm or midriff, generally arising from irritation of the stomach from food or wind, and hence a very common disease amongst children. It is also produced by the irritation of worms.

*Treatment.*—The common hiccup is frequently removed by drinking a draught of any liquid, or a small quantity of vinegar; by holding the breath, and sometimes by swallowing dry bread. It is usually removed in children by warm carminatives, with a few drops of sal volatile, or by any little circumstance that may serve to divert the child's attention at the moment, in the way of surprise, or otherwise. Should it, however, arise from an acid state of the stomach, with a long-continued diarrhoea, the testaceous powders should be freely administered.

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## HOOPING OR CHIN COUGH.

This disease usually comes on with a difficulty of breathing, some degree of thirst, a quick pulse, and other slight febrile

symptoms, which are succeeded by a hoarseness, cough, and difficulty of expectoration. These symptoms continue, perhaps, for a fortnight or more; at the end of which time the disease puts on its peculiar and characteristic form, and is now evident, as the cough becomes convulsive, and is attended with a sound which has been called a whoop.

*Treatment.*—At the commencement of this disease, emetics of ipecacuanha and antimonial wine should be given every evening for a week. The bowels should be kept open, daily, by powders composed of jalap, calomel, and James's powders, occasionally giving a dose of castor oil. All purgatives should be given in the morning, or as early as possible in the day, that their operation may be over before night, so as not to disturb the child's rest. During the day or night, a tablespoonful of the following mixture may be repeatedly given to a child of from two to three years old, when the cough is troublesome:—

Dissolve two scruples of sal sodæ in half a pint of soft water; to which add two drachms of ipecacuanha wine, and ten drops of laudanum, and sweeten with barley or lump sugar. The hands, the soles of the feet, the spine of the back, and the pit of the stomach, may be rubbed with oil of nutmeg, oil of amber, or of sal volatile, or with any stimulating and antispasmodic liniment.

Change of air, when the season permits, will generally be found useful; but discrimination is required, as it may in some cases prove hurtful. Pure air, however, is necessary in all stages of this complaint. Should the fever run high, the breathing become laborious, and the cough so violent as to cause the face and neck to be swollen, with symptoms of suffocation, recourse must be had to bleeding, either by the lancet, leeches, or cupping. Should these distressing symptoms still continue after the operation, the bleeding should be repeated in three or four days. The inhaling of atmospheric air slightly impregnated with the fumes of boiling tar, and the oxysyrup of the lobelia inflata, have been found valuable remedies in allaying the cough. The extract of hemlock has been advantageously employed. The tincture of colchicum seeds, in the dose of from five to fifteen drops three times a day, has also been much recommended in this disease; but it requires great caution in its use. From the commencement of the whooping-cough till it runs its course, and for some time after, even for children of five or six years of age, the diet should be little more than milk and broths. These are easily digested, and will afford much more good nourishment than any kind of meats, and will sit much lighter on the stomach than puddings or pastry; the latter of which is exceedingly injurious. Should the milk be found to

curdle on the stomach, a little common salt, or testaceous powder, may be added to it occasionally; or asses' milk may be substituted for cow's. This plan will be all that is required in the common hooping-cough; but there are many cases which will require other means, and demand all the skill of an experienced physician. When taken in time, and properly treated, this disease is rarely fatal, as long as the patient is free from fever or other disease, except to young infants; but it is no doubt contagious, and the system once infected is secure from future attacks.

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## MEASLES.

*Symptoms.*—This disease is attended with fever of an inflammatory character; there is cough, sneezing, a watery state of the eyes and nose, shivering succeeded by flushes of heat, lassitude, difficulty of breathing arising from inflammation of the air-tubes, and a determination of thin acrid matter to the surface, which manifests itself in red spots all over the body, more especially on the neck and arms. These spots disappear after a few days in a mealy scaling of the scarf skin. The eruption generally commences on the third day of the fever, and terminates about the eighth or ninth. The fever does not subside on the appearance of the eruption as in small-pox, but continues unabated, with oppression and anxiety at the pit of the stomach, until about the sixth day, when it undergoes a material change for the better, attended with relaxation of the bowels.

*Distinguishing Characters.*—It is distinguished from scarlet fever by the nature of the eruption, it being more elevated above the surface in measles than in scarlet fever, by its appearing in well-defined and crescentic patches; the eruption in scarlet fever appearing in dotted points, or in one uniform redness over the whole body; by the watery and swelled condition of the eyes and nose, and by the absence of sore throat, which, in 99 cases out of every 100, accompanies scarlatina or scarlet fever.

*Cause of its Origin.*—Specific contagion, to which all persons are liable once in their lives. The disease itself is not to be so much dreaded as its after consequences. These are inflammation of the lungs, inflammatory sore throat, discharges from the nose and eyes, bowel complaint of a severe form, disease of the mesenteric glands, and even consumption. A child who is exposed to the contagion of measles, cannot be pronounced out of danger of catching them for a period of fourteen days, the disease taking that time to fully develop itself.



*Treatment.*—The patient should be kept in a moderately warm room, and in bed; he should be kept on light food, such as barley water, weak beef tea, mutton broth, light puddings, such as rice, and bread and butter puddings. All animal food, in a solid state, should be dispensed with, as well as stimulating and fermented liquors.

In the commencement of the disease, when there is much heat of skin and difficulty of breathing, an emetic will prove very serviceable; this should consist of the powder of ipecacuanha, according to the age of the patient (*see Article Ipecacuanha*). A brisk purge should then be given if the bowels be at all confined, consisting of jalap and calomel (*see those Articles for Doses*), which should be taken in something thick, such as jam, sugar and water, or gruel. The stomach and bowels being by those means emptied of their contents, the patient may take the following fever mixture with advantage:

Take of Mindererus Spirit, 4 drachms.  
 Sweet Spirit of Nitre, 2 ditto.  
 Syrup of Saffron, 4 ditto.  
 Antimonial Wine, 2 ditto.  
 Camphor Mixture, 4½ ounces.  
 Mix.

Two tablespoonfuls every four hours for persons above 16 years; one tablespoonful every four hours for persons above 10 years; and half a tablespoonful for children above five years; infants under five years may take a teaspoonful every four hours.

The cough and hoarseness will be relieved by the inhalation of the steam of warm water, by drinking barley water, in which may be dissolved some powdered gum arabic, or by thin arrow root, to which may be added a little powdered nitre; and should the cough be troublesome, small doses of syrup of poppy, according to the age of the patient, may be given with advantage. The following will be a good cough mixture for persons above 15 years of age:

Take of Paregoric Elixir, 4 drachms.  
 Syrup of Poppy, 4 ditto.  
 Common Nitre, 1 ditto.  
 Camphor Mixture, 5 ounces.

Make a mixture; a tablespoonful or two, every four hours, if the cough be troublesome.

The inflammation of the eyes will be relieved by exposing them to the steam of warm water, or bathing them in warm water. If the inflammation of the lungs run high, which will be known by



increase of fever and difficulty of breathing, leeches and blisters will be necessary. If the bowel complaint which attends this disease becomes troublesome, or of long continuance, it must be arrested by the usual means resorted to in such cases. For formula of astringent mixture (*see Diarrhœa*).

Should the eruption retire suddenly, and be followed by convulsions, difficulty of breathing, sinking, or delirium, the patient should be immediately placed in the warm bath, blisters or mustard plasters applied to the chest, and warm, diffusible stimulants, such as brandy and water, wine and water; camphor and ammonia should be also administered, with the view of bringing back the eruption to the surface. The following will be a good stimulating mixture in these cases:

Take of Carbonate of Ammonia, 10 grains.

Compound Tincture of Cardamoms, 4 drachms,

Sweet Spirit of Nitre, 1 ditto.

Cinnamon Water, 1½ ounce.

Make a mixture; two teaspoonsful for children above three years old every two hours; and one teaspoonful for children between 12 months and three years; for children under 12 months half a teaspoonful.

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## MUMPS.

This disease chiefly affects children, particularly among the lower class of people; it is often epidemic, and by some practitioners is supposed to be contagious.

The mumps generally commences with a swelling or inflammation of the glands immediately situated under the ears, a slight fever, a quick pulse, and a loaded tongue. The child complains of pain in the neck, and soreness in the throat; the tumour increases during three or four days, and then gradually declines.

This disease seldom requires the assistance of medicine; and all that is in general requisite, is to keep the head and face warm, to avoid taking cold, and to open the bowels by the mildest cooling laxatives, and to use the antiphlogistic regimen. Should the breasts in the female, or the testes in the male, be affected, more active treatment will be necessary, and the aid of a physician or surgeon should be obtained to prevent the destruction of those organs.

## NETTLE RASH.

The eruption so called, from its resemblance to the effects produced by the sting of a nettle, is not contagious, though in many instances it is attended with much fever. It is rather a troublesome than a dangerous complaint. It is almost always accompanied by sickness of stomach, headache, giddiness, and great susceptibility to become chilly upon the slightest exposure of any portion of the body. The fever which attends, as well as the itching, is usually much increased towards the evening.

*Treatment.*—Nettle rash is usually a very mild disease, and seldom requires any medicine beyond a cooling purgative. If the eruption has continued several days, magnesia or lime-water should be freely given. A milk diet should be adhered to; and if no fever be present, chicken broth and beef-tea may be allowed.

To relieve the excessive itching, the patient should be liberally dusted with violet hair-powder or flour, and resist as much as possible the desire of scratching.

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## PROTRUSION OR BEARING DOWN OF THE BOWEL.

This disease is most frequently met with in children of a weak habit, or who have been much affected with severe purging. Astringent injections, made with the infusion of galls or oak bark, with a small proportion of opium, after the gut has been replaced, (which should be done either by continued gentle pressure or by means of a small candle, with the end besmeared with fresh spermaceti ointment,) have been advantageously used. The child, for some time afterwards, should not be permitted to strain, nor assume the usual position at stool, but should be kept in the erect posture, with his hips held together, so as to compress and support the gut. Children affected with this complaint should usually sit on a hard, flat-bottomed stool, or a chair without arms, and of such a height that their feet may not touch the ground.

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## RICKETS.

This disease is peculiar to infants and children from the age of six months to two or three years; and if not cured before the fifth or sixth year, the body continues weakly and deformed.

The rickets is indicated by an enlargement of the belly, head, and joints; the swelling first commences in the wrists and ankles, extends to the knees and elbows; subsequently the bones throughout the frame are enlarged, and lose their consistence and solidity. The remote causes of this disease are bad nursing, bad food, &c. Mothers should be cautious of putting female infants too soon on their legs, particularly if there be the slightest appearance of rickets or serofula in the system.

*Treatment.*—As this disease appears to arise from a general weakness and relaxation, the indications of cure are to brace and strengthen the solids, and to promote digestion, and the formation of good chyle. These ends will be attained by wholesome and dry food, suited to the age; good bread or biseuit; and roasted meats rather than boiled, with a little port wine; by cold bathing, friction, bathing the back with spirituous embrocations, or warm balsamic liniments; by strengthening plasters, gentle emetics of ipecacuanha, mild purges, with rhubarb, as occasion may require; and by bark, chalybeates, air, and exercise. The child must, above all, have good nursing; and if it be too young to exercise itself by walking and such like, the nurse, besides affording it every exercise it can bear, should dash a few drops of water suddenly in its face several times a day. This will oblige the infant to put almost every muscle into action, by which the blood will be forced through the minute vessels, and many of the advantages of exercise produced, and in a more powerful manner.

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## RINGWORM.

The eruption termed ringworm is too well known to require any description. A very popular application is common ink, the efficacy of which chiefly depends on the iron it contains. When the scalp is much affected, the head should be shaved every four or five days, washed twice a day with warm soft soap and water, and the following lotion applied night and morning:—

Borax, one ounce.  
 Distilled vinegar, four ounces.  
 Elder flower water, twelve ounces.

The oiled silk cap should be constantly worn, and mild purgatives taken every second day.

## SCALD-HEAD.

There are two distinct species of this disease—the one commonly known by the term scald-head, the other by that of the ring-worm of the head.

The scald-head continues, in some instances, from three to eighteen months; and is in general too well known to need description.

*Treatment.*—The head should be shaved at least once a week, washed twice a day with warm soft soap and water, and anointed after each washing with the zinc ointment, tar ointment, or the diluted citrine ointment. During the use of these ointments, a cap made of oiled silk should be worn. The bowels should be attended to; and alteratives, as sarsaparilla, mercurials, &c., will assist the cure.

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## SCARLET FEVER

Is a contagious disease, which spreads rapidly among children, and is often either very mild, or very severe and malignant. In its mild state it requires scarcely any medical treatment, but in its severe character it demands the most skilful and judicious management on the part of the physician to bring it to a happy termination.

This fever begins with a chilliness and sickness at the stomach, with vomitings; sometimes with a soreness in the throat, and swelling in the face. On the second day, difficulty of swallowing, loss of appetite, great thirst, hot and dry skin, are complained of. On the third day, the face, neck, and breast, appear redder than usual. On the fourth day the face begins to swell; the rash, in colour like that of a boiled lobster-shell, becomes universal, and increases to a great degree of intensity; it afterwards coalesces and disappears, leaving a desquamation of the skin, which falls off in branny scales, and the patient begins to recover strength and appetite.

*Treatment.*—All that is requisite in the treatment of mild scarlet fever is to keep the patient in a moderate and equable temperature, to preserve the apartment clean and open, to enforce a light diet without animal food, to give cooling acidulated liquors for common drink, and to administer gentle aperients, more particularly towards the decline of the eruption.

Where there is a sensation of soreness in the throat, and the head appears much affected, and where the symptoms of fever run high, no time should be lost in sending for a physician. If one

cannot be had, an emetic of antimonial wine should be given; after the operation of the emetic, a dose of James's powder, combined with calomel, should be taken, and repeated every three or four hours until the bowels operate. When the skin is very hot and dry, the whole body may be sponged with tepid or cold water, which will refresh the patient, moderate the heat of fever, and dispose to a calm sleep. The throat should be often gargled with infusion of roses; or, if the child be too young to perform that operation, it should be syringed. When the throat is much affected, and the fever of a low kind, bark, quinine, camphor, muriatic acid, &c., should be given internally, and the chlorates of soda and lime used in the form of a gargle or lotion. The scaly appearance of the skin after this disease may be removed by dissolving about an ounce of sal soda in a warm-bath. During convalescence the secretions and excretions ought to be promoted, more especially those from the bowels; and a warm-bath occasionally resorted to at bedtime.

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### TEETHING.

Teething is one of the most important operations which an infant performs. It is at the period of teething that the constitution of the child is first tried; for if it be good, or rather, if to a good constitution be joined proper management during the preceding months of the infant's life, the process of teething goes on without much inconvenience to the child; whereas, if the previous management have been defective, if improper food have been allowed, the moral treatment been bad, and exposure to the fresh air denied, so that the infant's health has been deranged, then teething becomes a process of danger.

The first appearance of teeth usually begins about the sixth or seventh month. It may be much earlier, as the third or fourth month; but oftener is delayed to a later period. The process is commonly completed during the first year, or year and a half, but may be protracted beyond the second year.

The number of the first set, or milk-teeth, is twenty, and they make their appearance usually in pairs, those of the lower jaw coming out before the corresponding pairs of the upper, and a degree of uniformity is to be observed in the order and times of their appearing; thus the two middle incisores, or cutters of the lower jaw, appear first: then, after an interval of three or four weeks, the upper corresponding incisores follow. After two teeth

in each jaw have appeared, it is, in some instances, a considerable time before the contiguous ones come out; but now and then six or eight are cut in hasty succession. The incisores are succeeded by the four grinders, then the dog-teeth, and the last of all an infant's first teeth, their antagonists, or the eye-teeth. This is the ordinary number of children's first teeth, though, it must be recollected, there are many remarkable as well as curious deviations from the order just related—such as children being born with teeth ready cut, the first tooth not making its appearance till after the fourteenth month, &c. &c.

Teething is commonly preceded and accompanied with various symptoms: the child drivels; the gums swell, spread, and become hot; there is frequently much redness in the cheeks, with eruptions on the skin, especially on the face; the bowels are relaxed, with various coloured stools—as green, very pale yellow, or clay-coloured; and often spasms in various parts of the body, especially when passing from the waking to the sleeping state, or startings when asleep.

The evil which arises to children from teething is very various in its kind; indeed it comprises nearly all the diseases to which children are liable.

Some children cut their teeth with a cough, others with purging, and the latter, especially, is thought to be a favourable symptom of dentition. Again, teething predisposes the body to be acted on by some of the causes of fever. Most children are feverish whilst cutting their teeth; but dentition frequently aggravates common feverish complaints, and makes them dangerous; but if infants be fed on proper diet, if air, exercise, and clothing, be allowed them in due proportion, and if their minds be kept under control, the period of teething will pass over almost without being remarked.

Notwithstanding so much may be done to avert the dangers of teething, scarcely any child escapes some degree of inconvenience. In almost all children, the head and bowels become affected, the gums are much inflamed and swollen, the mouth is hot, the tongue white, and the skin dry and hotter than natural. In short, considerable fever is present, and is in all cases attended by so much local cause of uneasiness as to make them very irritable. When symptoms like these occur, it becomes necessary to restrict the child with regard to the quantity and quality of his food. The usual remedies also in cases of fever and diarrhœa are indicated; such as alteratives combined with gentle laxatives, the warm-bath, &c. A great local means of giving relief still remains for adoption. Lancing the gums should never be neglected in these



cases.\* When the fever is simple, it is seldom attended by dangerous symptoms; but if oppression or obstruction, or inflammation of any vital organ, occur, then danger approaches, and these symptoms should be attended to as speedily as possible.

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### WATER IN THE HEAD.

This disease is distinguished into *acute* and *chronic*. The former often takes place insidiously, and, having reached a certain pitch, it proceeds with more or less rapidity, and generally to a fatal termination. The latter may be congenital, or may have commenced before birth, but it is more frequently observed subsequent to birth; it also terminates fatally in the great majority of instances.

Water in the head is almost peculiar to infants, and chiefly to those of a scrofulous or rickety habit. Morgagni asserts that it is more common to girls than to boys. The attack is sometimes very sudden; but the complaint more commonly begins with the appearance of slow fever, especially in older children, with debility of the arms, and pains in the limbs, and frequently in the upper part of the neck. It has been sometimes remarked, that, in the commencement of the attack, the child has appeared to be more acute and lively than ever before, but the spirits decline as the disease advances. After a while the child is suddenly seized with pain in the head, and generally in the forepart, and retches once or more; it becomes heavy and dull; can bear no posture but that of lying horizontally; the pulse becomes irregular, but usually very slow; as the disease advances it grows frequent, the cheeks become flushed, the pupils of the eyes are dilated, the stools and urine come away involuntarily, and the patient lies sleeping, or is convulsed, and at times in great pain. Other symptoms indicative of the disease are, a hand often put to the head, or lifted upwards, and waving about; costiveness; expressions of anxiety, and dislike to be moved; picking of the nose, and grinding of the teeth during sleep. These and other symptoms, however, laid down as indications of water in the brain, are, in some degree, common to other diseases of children, that are occasionally mistaken for the fever which accompanies water in the head.

\* The mode of lancing the gums is not immaterial. On examining an infant's mouth, it will be seen that a ridge runs along the middle of the gum for the whole circle of each jaw; this should be cut freely, and in the shape of an X, the incision being carried down to the tooth, and made to cross each other on the tooth itself.



*Treatment.*—In the inflammatory stage of this complaint, the temples should be covered with leeches, and repeated daily as long as any symptoms of inflammation appear. The head should be shaved, and sponged with cold water, while the body is kept in a warm or vapour bath, and the bowels freely emptied by the most active purgatives. To a child of four or five years old may be given the following powders:—

Powdered scammony, calomel, and jalap, twenty grains of each.  
Gamboge, ten grains.

Mix, and divide into six equal parts, one to be given every second or third hour, until they operate copiously.

In the second stage of this disease, or that in which the watery effusion has already commenced, and which is indicated by symptoms of a still more alarming nature, the pulse becomes slow and unequal, the pain in the head seems to abate, a lethargic torpor succeeds, and the squinting and dilatation of the pupils increase. The child lies with one or both eyes half open, which become insensible to the light; the breathing is laborious; the flushing of the face is frequent, but of short duration, and followed by a deadly paleness. In this stage of the disease blisters must be applied to the nape of the neck, and James's powders, combined with calomel, (from two to four grains of each,) given every six or eight hours, until the mouth becomes affected. The body should be kept as much as possible in an upright position. In some cases strong coffee dissipates the drowsiness, recalls the lost warmth of the skin, and becomes the principal cause of cure. The diet in the earlier and more inflammatory stage should be strictly diluent, but when the disease has already run on for a number of days, with rapidly increasing debility and emaciation, it becomes necessary to support the strength with beef-tea, jelly, ass's milk, &c. When there is reason to suspect a predisposition to water in the head, the earliest attention should be paid to every deviation from the natural state of the functions of the body. To support their tone, and that of the whole system, by good air, nutritious, unirritating diet, and daily exercise, is a point of great importance. (These directions have been given here for those only who are removed from medical assistance: in *all others, immediate aid should be sought.*)

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## WEANING.

The period of weaning is often attended with considerable danger. It is no uncommon occurrence for children, who have

never suffered a day's ill health whilst nourished by the mother's milk, to become sickly immediately or soon after weaning, and to suffer from bowel complaints, convulsions, and other diseases, to an alarming degree. The time of weaning should be that indicated by nature, (that is to say, between the seventh and twelfth months in ordinary cases,) when, by providing the child with teeth, she furnishes it with the means of obtaining nourishment from substances of a somewhat solid form.

When the weaning has been attempted before the front teeth have pierced the gums, unless the change from the breast-milk to artificial food be very carefully managed, disease is very generally induced. One of the most frequent and fatal of the diseases of children is the *Weaning Brash*. This disease takes place from two to three, or sometimes even so late as six weeks after weaning. The symptoms are purging, attended with pain and green-coloured dejections. Loathing of food, emaciation, restlessness, thirst, and fever follow. This disease, if neglected, proves fatal about the sixth or seventh week, sometimes sooner, by incessant vomiting or purging, or by convulsions. Some physicians recommend the exhibition of calomel in small doses night and morning, but the most effectual remedy in the bowel complaints of children from weaning, when practicable, is to restore the nutriment of the breast-milk for a time, and when the food is thus adapted to the digestive organs of the infant, the mildest laxatives—such as castor-oil, rhubarb, magnesia, &c., to carry off any offending matter, will generally suffice. When the breast-milk cannot be resorted to, artificial food the least capable of fermenting or producing irritation must be substituted. Milk-whey, thin arrow-root, or gruel, with a very small proportion of milk, generally agree very well; but the substitution of artificial food for the breast-milk should be gradually effected, care being taken that the intervals of feeding be neither too frequent nor too long. (For further information on this subject see same subject in the *Management of Children in Health*.)

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## WORMS.

More than *twenty* of these pestiferous creatures that attack man have been enumerated: some penetrate into the very seat of thought; others disturb his bile; others circulate with the blood in his veins; others, again, are seated in his kidneys; others in his muscles; the guinea-worm in his cellular tissue; the ovaries

of females are infested by another; but the small white worms, the round worm, and the tape worms, which extend themselves, joint by joint, to an enormous length in the intestines of the human subject, are those which chiefly require medical treatment.

The generation of these animals in the bowels is to be attributed chiefly to unwholesome food and bad digestion; and they appear most frequently in those who are of a relaxed and feeble habit, and whose bowels contain an undue quantity of mucus, or slimy matter. Hence children, whose bowels are weak, are particularly subject to this malady. The existence of worms is denoted by a variable, capricious appetite, fœtid breath, picking of the nose, pains of the stomach and bowels, grinding of the teeth during sleep, emaciation, and occasionally convulsions.

*Treatment.*—The method of destroying worms is by killing and dislodging them, and forcing them away with the slimy mucus in which they lodge. In order to effect this, worm medicine, as cowhage, powdered tin, the male fern, &c., should be used to dislodge or destroy them, and afterwards active purgatives, as calomel, jalap, and scammony, be given.

Ching's lozenges, which are supposed to contain calomel and extract of jalap, are active and useful, but should not be indiscriminately employed.

For the destruction of the tape worm, the oil of turpentine has been found the most effectual remedy. It may be given in doses, increasing from twenty drops to a dessert spoonful, according to the age, strength, and other circumstances of the patient. In order to prevent the subsequent generation of worms, the digestive powers should be strengthened by the exhibition of bitters, chalybeates, and the oxide of bismuth; and avoiding all acid or unripe fruit, fermented liquors, &c. The preparations of iron are, however, most to be depended on for preventing the regeneration of all worms.

# MANAGEMENT OF CHILDREN IN HEALTH.

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## MATERNAL NURSING.

As prevention is, in the majority of instances, easier than the cure of disease, the following judicious directions for the management of children in health, taken from the work of Dr. Thomas Bull, are offered to the readers of this little volume.

### THE DUTY AND ADVANTAGES OF THE MOTHER NURSING HER INFANT.

It may be called a fixed law of Nature that a *healthy* woman should suckle her offspring. There are exceptions; but as a general rule it holds good, and like all other laws in nature, it cannot be broken with impunity. To refuse to comply with this arrangement of Providence, is to forego the first reward of previous suffering. It is plainly intended to cherish and increase the love of the parent herself, and to establish in the dependent and helpless infant from the first hours of its existence those associations on which its affection and confidence afterwards will be most securely founded. The evidence of design is manifest. So long as the child is unborn, no milk is secreted in the mother's breast, but no sooner does she give it birth, than this fluid is prepared and poured forth; admirably fitted in its qualities for the rapid growth of its delicate organism. It embraces the three principles (the albuminous, the oleaginous, and saccharine,) of which the diet of man consists in his most perfect physical development and greatest intellectual vigour; and moreover is the only food supplied by nature, in which such a combination does exist. "It is a model," says Dr. Prout, "of what an alimentary substance ought to be—a kind of prototype, as it were, of nutritious materials in general." And thus it continues to be secreted day by day, until the time arrives, when, the digestive organs having acquired the

power of preparing for themselves from the various substances which constitute our diet this compound necessary for our sustenance and growth, milk, is no longer required.

Nursing would also seem to be as beneficial to the system of the healthy woman as to her child. In the lying-in month it undoubtedly is the means of preventing or diminishing the tendency to disease. During the whole period of nursing it contributes greatly to preserve and promote the mother's health, for no period of the woman's life, generally speaking, is so healthy as this; and many a woman who has previously been delicate will become robust and strong at this time. In most women it prevents the too frequent recurrence of pregnancy, than which nothing tends so surely to undermine the constitution, and to induce a premature old age. It diminishes the disposition to cancerous affections of the breast, for although women who have had children are still liable to these; "yet it is undoubtedly true, that breasts which have been unemployed in suckling in women who have been married, but are childless, and in those who have remained single, are more prone to malignant diseases than those of women who have nursed large families."\*

It is clear that there is no nourishment so well suited to the constitution of the individual child as its own mother's milk: there is a natural relation between the two which is not so perfectly realized when the child is transferred to another breast. This practice, however, when it does not arise from necessity, is not nearly so prevalent as in former times. There are few women in the present day disposed to devolve the dearest and greatest privilege of a mother on a stranger. But whenever, without due reason, the *healthy* woman of fashionable life, from caprice, the fear of trouble, the loss of pleasure, the anxiety to avoid the confinement which suckling necessarily imposes, or any cause of a like frivolous kind,—feels disposed to break this law of her being, it behooves her to look to the possible consequences to herself of being out of harmony with it,—for no one can fail to perceive the significance of the facts to which allusion has just been made. Animals, even those of the most ferocious character, show affection for their young; *they* do not forsake or neglect them, but yield them their milk and watch over them with the tenderest care;—woman, who is possessed of reason as well as instinct, must not manifest a love below that of the brute creature.

There are circumstances undoubtedly which disqualify the parent from the performance of this duty, and I believe such indi-

\* Sir Astley Cooper on Diseases of the Breast, p. 137.

viduals for the most part will be found less liable to the consequences of such neglect (just referred to) than the robust and healthy. Sometimes a healthy but delicate state of the system will forbid it. Here, however, it will be well to make the attempt, if sanctioned by the medical attendant; and if persevering attention is given to the various measures that invigorate the system, it may be that the delicate woman will become strong, and be enabled to nurse, beneficially to herself and her child. The experiment should always be fairly tried, and never given up hastily; and if it fail, the consequences of the trial, under judicious medical superintendence, will not be attended with injury. Sometimes a defect in the structure of the breasts or nipples renders them unfit to yield milk; here there is no remedy, and the disqualification must be submitted to. Sometimes the defect is simply in the nipple. It may be too small and sunken,—or, from disease, it may be excoriated or cracked, and whenever the attempt to suckle is made, it is attended with great agony;—perseverance in the use of proper means will frequently remedy this in both cases. There are now and then, however, instances in which experience strongly proves the parent ought most assuredly not to attempt nursing her offspring, when it would inflict irremediable injury; and to these cases I shall devote the next section.

#### OF MOTHERS WHO OUGHT NOT TO SUCKLE.

There are some women who ought never to undertake the office of suckling, not so much on account of their own health as that of their offspring.

*The woman of a consumptive and strumous constitution.*—In the infant born of such a parent there will be a constitutional predisposition to the same disease; and if it is nourished from her system, this hereditary predisposition will be confirmed. “No fact in medicine is better established than that which proves the hereditary transmission from parents to children of a constitutional liability to pulmonary disease, and especially to consumption, yet no condition is less attended to in forming matrimonial engagements. The children of serofulous and consumptive parents are generally precocious, and their minds being early matured, they engage early in the business of life, and often enter the married state before their bodily frame has had time to consolidate. For a few years everything seems to go on prosperously, and a numerous family gathers around them. All at once, however,



even while youth remains, their physical powers begin to give way, and they drop prematurely into the grave, exhausted by consumption, and leaving children behind them destined, in all probability, either to be cut off as they approach maturity, or to run through the same delusive but fatal career as that of the parents from whom they derived their existence.”\* There is scarcely an individual who reads these statements who will not recall some illustration of their truth, though they perhaps may have hitherto been in ignorance of the cause. The constitution, then, of such a female renders her unfit for the task of nursing; and however painful to her feelings it may be, she must recollect that it will be far better for her own health, and infinitely more so for that of the child, that she should not even attempt it;—that her own health would be injured, and her infant’s sooner or later destroyed, by it.

The infant of a consumptive parent, however, must not be brought up by hand. It must have a young, healthy, and vigorous wet nurse; and in selecting a woman for this important duty very great care must be observed.† The child should be nursed until it is twelve or fifteen months old. In some cases it will be right to continue it until the first set of teeth have appeared, when it will be desirable that a fresh wet-nurse should be obtained for the last six months, and one that has been confined about six weeks or two months will be most suitable. If the child is partially fed during the latter months (from necessity or any other cause), the food should be of the lightest quality, and constitute but a small proportion of its nutriment. Such a child must have a perfectly pure atmosphere to breathe, and sufficient exercise. All derangement of the digestive functions should be brought under the notice of the medical attendant. By a rigid attention to these measures, the mother adopts the surest antidote indirectly to subdue the constitutional predisposition to that disease, the seeds of which, if not inherited from the parent, are frequently developed in the infant during the period of nursing; and at the same time she takes the best means to engender a sound and healthy constitution in her child. This, surely, is worth any sacrifice.

If the infant derives the disposition to a strumous constitution entirely from the father, and the mother’s health be unexceptionable, then I would strongly advise her to suckle her own child.

\* Combe’s Principles of Physiology applied to the Preservation of Health, &c.

† See Choice of a Wet Nurse, p. 207.



This subject is fully dwelt upon in the chapter on the prevention of scrofula and consumption.

*The mother of a highly susceptible nervous temperament.*—The mother who is alarmed at any accidental change she may happen to notice in her infant's countenance,—who is excited and agitated by the ordinary occurrences of the day:—such a parent will do her offspring more harm than good by attempting to suckle it. Her milk will be totally unfit for its nourishment; at one time it will be deficient in quantity, at another, so depraved in its quality that serious disturbance to the infant's health will ensue. The habit of "giving way," on which for the most part all this depends, is now wrong, if it never was before. Self-control is in general the thing that is needed. There are, however, exceptions to this as the cause. The young and inexperienced mother, who is a parent for the first time, and altogether ignorant of the duties of her office, and at the same time most anxious to fulfil them faithfully, is but too frequently an instance in point; although at a future period she will generally make a good nurse. The following is an illustration:—A young married lady gave birth to a plump, healthy boy. Everything went on well for three weeks, the mother having an abundant supply of milk, and the infant evidently thriving upon it. About this time, however, the child had frequent fits of crying; the bowels became obstinately costive;—the motions being lumpy, of a mixed colour, quite dry, and passed with great pain. It became rapidly thin, and after a short time its flesh was so wasted, and became so flabby, that it might be said literally to hang on the bones. The fits of crying now increased in frequency and violence, coming on every time it left the breast, when it would commence screaming violently, beat the air with its hands and feet, and nothing could appease it. This would last for half an hour or more, when it would fall asleep quite exhausted; the fit recurring again and again after every nursing. It was very evident that the infant's hunger was not satisfied or its body nourished by the parent's milk, which, although abundant in quantity (the breast being large and full of milk), was at this time seriously deteriorated in its nutritive quality. This was caused, I believe, from great anxiety of mind. Her monthly nurse became suddenly deranged, and the whole responsibility and care of the child thus devolved upon the mother, while she was entirely ignorant of her duties. A wet-nurse was obtained. In a very few hours after this change was effected, the screaming ceased, the child had quiet and refreshing sleep, and in twelve hours a healthy motion was passed. The child gained flesh almost as quickly as it had previously lost it, and is now a

fine and healthy boy. The mother has since had two children, and proved a good nurse.

Whenever there has previously existed *any nervous or mental affection* in the parent, wet-nurse suckling is imperatively required, and with a judicious management of childhood will do much to counteract the hereditary disposition in the offspring.

*The mother who only nurses her infant when it suits her convenience, ought not to engage in this duty at all.*—The mother who cannot make up her mind exclusively to devote herself to the duties of a nurse, and give up all engagements that would interfere with her health, and so with the formation of healthy milk, and with the regular and stated period of nursing her infant, ought never to suckle. It is unnecessary to say why, but I think it right, for the child's sake, to add, that if it does not sicken, pine, and die, it will not have to thank its parent,—and disease, in all human probability, will be generated in its constitution, to manifest itself at some future time.

The child, then, under all the foregoing circumstances, must be provided with its support from another source, and a wet-nurse is the best.

#### RULES FOR NURSING THE INFANT.

From the first moment the infant is applied to the breast, it must be nursed upon a certain plan: this is essential to the well-doing of the child. One of the most fruitful sources of disease in the early part of infantile life is improper management in relation to diet; and a large portion of the suffering and mortality which occurs during this period, arises from this cause alone. Regularity, moreover, is necessary to the parent's health.

*The plan to be followed until the breast-milk is established.*—As soon as the infant is dressed, many nurses are in the habit of dosing it with castor oil, or honey of roses, and almond oil. This is objectionable on many accounts; it is quite uncalled for so early, and it may be altogether unnecessary, if they only wait. The infant should at once be put quietly to sleep in a cot or bed, so situated that it shall not be exposed to draughts of cold air, and that the eyes of the babe shall be protected from a strong light, which as yet they are unable to bear.\* It should be allowed to repose for some hours; when the mother having also obtained some sleep, it is proper to place the child to the breast, *provided the mother has at some former time performed the office of a nurse.*

\* Full directions are given upon this subject in the "Hints to Mothers," in the chapter on the lying-in room.

This should always be done within the first four-and-twenty hours, partly to draw out and form the nipple before any hardness of the breast occurs, and renders that difficult, and partly to encourage the flow of milk, for every effort made by the infant to obtain it will in this case excite its secretion.

It has been supposed by some that the milk first secreted (the *colostrum*) is improper for the child,—that it teases the bowels. The fact is, that it differs in an important quality from that which is soon after secreted ; but then it is a difference which nature has ordained and designed for a wise purpose. The bowels of the infant when born are loaded with a dark, black secretion, called meconium, of which it is essentially necessary that they should be relieved, or it proves a source of great irritation. The means for its removal are found in the aperient qualities of the *colostrum*, so that instead of its being injurious, it is highly necessary the child should take it. It is, therefore, only in those cases where the first milk of the parent's breast is not obtained, from the child being put to a wet-nurse, or from any other cause, and now and then when the first milk fails to be sufficiently purgative, the administration of a gentle aperient is justifiable. Half a teaspoonful of castor oil, repeated or not as may be necessary, is the best that can be given.

Occasionally, from disease or some unappreciable cause, the *colostric* character is retained by the milk for a considerable period, and the health of the infant greatly suffers. Milk in this condition will to the eye present all the usual appearances of healthy secretion, but by the microscope an important difference is very readily discovered, the nature of which it would be out of place to describe here, whilst to know the fact is important. Dr. Donnè relates the following case in point:—"A young woman was confined with her second child, July 23, 1836: she was apparently very healthy. On the 1st of August the milk was abundant and its aspect healthy, except that it was somewhat viscid. The child was quite healthy and well formed, but it frequently refused the breast without any appreciable cause. For twenty days after delivery the milk remained in the condition of *colostrum*, as above described, but its colour was normal, its consistence as in the healthy state, and externally this milk appeared as healthy as that of the wet-nurse. Eighteen days after delivery the child had diarrhœa; the milk did not change its character; and twelve days subsequently the child died, having gradually become emaciated. The former child by the same female died at the age of five months." Dr. Donnè merely mentions this fact, without wishing to infer any necessary connexion between the deaths of

the children and the conditions of the mother's milk; but he justly regards the coincidence as well deserving attention.

From the mother's breast alone then, in some cases, the child will be able from the first to derive its nourishment; but, in the majority of instances, particularly in first confinements, only in part, until the third or fourth day after delivery. Where this deficiency exists it must be supplied by an artificial diet, as like the breast-milk as can be found. This is obtained by taking either of ass's milk and boiling water equal parts,—or of cow's milk one-third and boiling water two-thirds, slightly sweetening the latter mixture with loaf-sugar. A few spoonful of one or the other of these (and the ass's milk is to be preferred) are to be given through the sucking-bottle, and not from the boat or spoon. This will secure the infant's stomach from repletion. It will not suck more than it requires—appetite being at this age a better guide than perhaps ever after. The act of sucking promotes the flow of saliva, and its mixture with the aliment that is being swallowed, which is necessary to digestion. Attention to this point will prevent derangement of stomach, with its train of acidity, flatulency, and colic. The breast-milk being fully established, and furnished in sufficient quantity, the artificial food is to be put aside, and from this time the nourishment is to be obtained from the breast alone.

*The plan to be followed until the first teeth appear.*—For a week or ten days the appetite of the infant must be the mother's guide as to the frequency in offering the breast. The stomach at birth is feeble, and as yet unaccustomed to food; its wants, therefore, are easily satisfied, but they are frequently renewed. An interval, however, sufficient for digesting the little swallowed is obtained before the appetite again revives, and a fresh supply is demanded.

*The week or ten days having expired,* the infant is to be nursed until the end of the lying-in month at regular intervals of every four hours night and day. This will allow sufficient time for each meal to be digested, and the stomach to regain the time necessary for the digestion of the next, and tend very essentially to promote the due and healthy action of the bowels. Such regularity, moreover, will do much to obviate fretfulness, and to prevent that constant cry which it appears to the parent and to all about her, that nothing but perpetually giving the breast to the infant can allay. This evil, indeed, generally grows out of irregular nursing. The young mother, considering every expression of uneasiness as an indication of appetite, runs into the very serious error of offering the breast at all times and seasons, so that, frequently, the child

has not left the breast ten minutes before it is again put there. From this injurious and dangerous practice the stomach of the infant becomes overloaded, the food remains undigested, the bowels disordered, fever excited, and, by-and-by, the infant becomes seriously ill, and is, perhaps, eventually lost; when, by simply observing from the first the rules of nursing laid down, it might have continued healthy, and grown into a vigorous child. These cases of indigestion in the infant, caused by irregular and too frequent nursing, are continually occurring, and medicine is given without permanent relief, because the cause of the mischief is not obviated—it is overlooked. Fortunately, in most cases, the mother, tired of a fruitless repetition of medicine, seeks further aid; when, by simply adopting a more rational course, the child's symptoms are removed, healthy digestion restored, and no relapse occurs; this happy issue being, perhaps, obtained without any further exhibition of medicine.

*The lying-in month having expired* it is advisable to alter the periods of night-nursing, or rather to do away with night-nursing altogether; that is, to suckle the infant as late as ten o'clock, P. M., and not put the child to the breast again until five o'clock the next morning. I am constantly in the habit of advising this measure, and I have always found it, when adopted, of great advantage to the mother's health, and never attended by the slightest injury to the child. With the latter it soon becomes a habit; to induce it, however, it must be taught early. It is true that where there is much delicacy and a feeble constitution, it will be necessary sometimes to postpone it a little longer. This very delicacy, however, whilst it demands a more frequent supply, calls for the greatest care in affording it, lest it be too frequent and too great in quantity. And be it remembered by the reader that this is only an occasional exception to a most important principle, the adoption of which should never be delayed, except from paramount necessity. Indeed, so convinced am I of the importance to the nursing mother of calm, quiet, and undisturbed repose during the night, that, whenever circumstances will allow of it, I would advise that the child from this time no longer sleep in the bed-room of its parent, but in charge of its nurse. Sleep is as necessary for the restoration of strength as nourishment itself, and the deprivation of it will soon diminish and deteriorate the quantity and quality of the mother's milk, and sometimes—the cause being little suspected—will drive it away altogether. I am fully aware of the repugnance of some mothers to this measure, and that even in the wealthiest families, where the best services can be obtained, and every convenience exists, they are unwilling to intrust the



child, that they desire should be constantly under their own eye, to a servant's care. Sooner or later, however, this change must take place, the most devoted mother must submit to it, and the peril is not greater at this time of life than at any other. The grand point is to select a proper person for this duty, and then to exercise over her an active, firm, and wise *surveillance*. This is seldom sufficiently regarded. A sensible and experienced nursemaid is the exception, not the rule. The short-sighted economy of a few pounds per annum is preferred before the services of one whose watchfulness and care over the physical and moral education of the child would repay a hundred-fold any sacrifice it might be necessary to make to obtain them. Upon this subject Dr. Donnè remarks: "Loin d'approuver l'usage adopté par beaucoup de mères pleines de dévouement et de tendresse, de faire coucher leurs enfants près d'elles, je suis si convaincu de la nécessité de ménager, autant que possible, leur sommeil et leur repos pendant la nuit, que je ne puis trop recommander, toutes les fois que le chose pourra se faire, que l'état de la fortune et la disposition de l'habitation le permettront, de tenir l'enfant éloigné de sa mère pendant la nuit."\*

This course, then, is to be followed until the appearance of the first teeth (about the sixth or seventh month), and if the parent be a healthy woman the quantity of milk supplied by the breast will generally be found sufficient to afford adequate nourishment to the child, without additional assistance from artificial food. The latter is on no account to be given (up to this period) unless, from deficiency of milk or some other cause, it be positively required. If, however, after the expiration of some months, this deficiency should exist, it must be made up by the mixture of cow's milk and water, and of this alone, if it agree with the child. It must be given, too, through the sucking-bottle until the teeth appear; after which time an alteration in the kind of food, and the mode of exhibiting it, similar to that proposed below, may be adopted.

*The plan to be followed after the first teeth have appeared.*—When the mother, at this period, has still an abundant supply of nourishing milk, and the child is healthy and evidently flourishing upon it, I would not recommend any immediate change. The parent may, with benefit to her own health, as well as with advantage to the child, pursue the same plan as heretofore for a few weeks longer. In general, however, the mother will require some little aid at this time, and artificial food may now be given twice

\* *Conseils aux Mères sur l'Allaitment*, p. 53.

in the course of the day, without risk or injury to the child. Good fresh cow's milk, with the addition of water or not, as it is found to agree best; Hard's farinaceous food; Leman's tops and bottoms; sago or arrow-root; or, if these disagree with the stomach, weak beef tea, veal or mutton broth, clear and free from fat, and mixed with an equal quantity of farinaceous food and a few grains of salt,—any one of these which the parent finds to agree best may be given with benefit.

As this is the first time that *artificial food* has been particularly referred to, it is right to observe, as a general remark applicable to its use at all times, that the greatest care must ever be taken in the selection of it, in its preparation, in the quantity given, and in the mode of giving it. In the *choice* of the food, the mother must be guided by circumstances: she must find out that which suits best; and, so long as the child flourishes, she should from no trivial cause change it. The different kinds just pointed out may be tried in the order given till one is found to agree. (The *mode of making* these preparations will be detailed hereafter.) This has been done because the defective manner in which artificial food is prepared is not unfrequently the sole cause of its failure. It is only necessary farther to observe upon this point, that the vessel in which it is made, as well as that out of which it is given to the child, must be perfectly sweet and clean. The *quantity given* must be small, lest the stomach be overloaded, which seldom fails, after a little while, to impair its tone, and give rise to the distressing dyspeptic symptoms before alluded to. The child must be *fed slowly*; and, minding this precaution, the sucking-bottle may now be discontinued, and the spoon used in its stead; but more full instructions upon all the foregoing points will be found in the chapter on "Artificial Feeding."

In about six weeks or two months after the artificial food has been in part commenced it may be given, if necessary, more frequently—three or four times in the twenty-four hours, and the breast of course less frequently. This will prepare the infant for weaning, which, under these circumstances, when the time arrives, will be easily accomplished.

Such is the plan of nursing to be followed by the mother until the infant is weaned entirely from the breast. The period when this ought to take place, as also the manner of accomplishing it, are detailed in the last section of this chapter.



## RULES FOR THE HEALTH OF THE NURSING MOTHER.

A careful attention on the part of the mother to her health is especially called for during nursing. Nourishing and digestible milk can be procured only from a healthy parent; and it is against common sense to expect that if a mother impairs her system by improper diet, neglect of exercise, and impure air, she can nevertheless provide as wholesome and uncontaminated a fluid for her child, as if she were diligently attentive to these points. Every ailment of the nurse is liable to affect the infant.

If good health has always been enjoyed, there should be no alteration in *the diet*; it should be the same as before confinement. If the natural appetite increase, the extra demand must be met by an increase in that kind of food which is wholesome, nourishing, and simple in quality, and not in that which is of a rich and pampering description. Stimuli are to be avoided, and it will be well both for parent and child to adopt a barley-milk beverage. It is a very prevalent and most mischievous error, to suppose that because a woman is nursing she ought therefore to live fully, and to add an allowance of wine, porter, or other fermented liquors, to her usual diet. The only result of this plan is, to cause an unnatural degree of fulness in the system, which places the nurse on the brink of disease, and which of itself frequently puts a stop to, instead of increasing, the secretion of milk. This practice of taking fermented liquors generally commences in the lying-in room. The young mother is there told that it is essential to the production of a plentiful supply of good breast-milk. And from a sense of duty this course is adopted, however disagreeable, as it really is to many who submit to it. The advice, however well meant, is not good advice, but frequently most mischievous. Malt liquor or wine is only useful to the woman who, possessing a healthy constitution and a system free from disease, is rather delicate than robust, but who, nevertheless, with advantage to herself or without detriment to the child, may suckle. Such an individual may make a trial of wine, or of a pint of good sound ale or porter in the four-and-twenty hours, and if it is found to have a favourable effect upon her health, and not produce discomfort or disturbance to the system, it should be persevered in. But here, as in the former case, more good will result from the assiduous employment day by day of general measures than from any stimuli. *The bowels* must be duly regulated, and if at any time an aperient is required, the selection is not unimportant. If it be desirable to act at the same time upon the infant's bowels, a saline

purgative, as Epsom or Cheltenham salts, should be taken; this, through its effect on the milk, will act on the child; if otherwise, a vegetable aperient should be chosen, as castor oil, confection of senna, or five grains of the compound extract of colocynth, with two grains of the extract of henbane, to prevent its griping.

I need scarcely remind the nursing parent of the importance of attending to *the state of the skin*, or of the invigorating effects of *the tepid or cold salt-water shower bath*, taken every morning upon rising. If the latter cannot be borne, sponging the body with tepid or cold salt water must be substituted. *Exercise and fresh air* are essential to the production of good and nourishing breast-milk, as they also contribute to increase the quantity secreted. No one can have seen much of practice in this metropolis, and not have been fully convinced of this fact. Wet or fine, if the mother be in good health, she should take the daily walk. The injurious influence of an indulgence in *late hours* night or morning, and the luxuries of dissipation and high life, will soon become manifest. Such habits not only lessen the mother's attention to her offspring, but really diminish her power of affording it nourishment; so that she is often a worse mother in these respects than the inhabitant of the meanest hovel.

A tranquil temper, and a happy, cheerful disposition, tend greatly to promote the production of healthy milk. Indeed there is no secretion of the human body that exhibits so quickly the injurious influence of the depressing emotions as that of the breast. And although we are not able at all times to detect by any agent we possess the changes which take place in its physical properties, so delicate an apparatus for testing its qualities is the digestive system of the infant, that it will sometimes instantly show that such changes have occurred by the serious symptoms which now and then arise. I might cite many instances that I have met with illustrative of this fact. In one case, the child had had repeated fits of convulsions from noon of the previous day; the parent had been suddenly summoned to her mother, attacked with apoplexy; anxious and excited, she gave the child the breast, and within half an hour the convulsions commenced;—other breast-milk was suggested and obtained, and the fits ceased; all the previous measures had been unsuccessful. In another instance convulsions occurred evidently from disorder of the breast-milk, but the source of derangement was not discovered until a few weeks after, when it appeared that, on the morning of the day when the child was attacked, the mother was made acquainted with the deranged condition of her husband's affairs. *Fear* has a powerful influence on the secretion; first changing its

properties, and then frequently stopping the secretion altogether. I was sent for to an infant between two and three months old in an attack of convulsions, so severe as to threaten a fatal termination. This child I had seen at the same time the day before sucking at the breast of its wet-nurse in perfect health, never having had a moment's illness. It had shown the first symptoms of indisposition the previous night, after the nurse had retired to rest; when, having been at the breast, it became restless, crying frequently, evidently from pain. In the course of the night the bowels were violently purged; towards morning the stomach would not retain the milk; and as the day advanced the general symptoms of uneasiness increased, and in the afternoon the convulsions above referred to came on. Upon inquiry I found the father of the young nurse had called on the previous evening, and not only violently abused his daughter, using severe and unwarrantable language, but had struck the poor girl, he being under the influence of liquor at the time. This interview produced such mental distress in the young woman as to attract the attention of her mistress, when an explanation of the cause ensued. Strict orders were given to forbid the man the house for the future; but the mischief was done; for it was too evident that the alarming state of the child had been produced by the deleterious change which had taken place in the nurse's milk. Remedial measures were used; the breast-milk withheld, and the infant, although it continued for many days in a doubtful state, eventually recovered. The young woman's milk, however, was altogether driven away, and another wet-nurse without delay was obliged to be obtained.

Perhaps the most remarkable instance on record of the effect of strong mental excitement on the secretion of the breast is one mentioned by Dr. Von Ammon; so remarkable, that the event could hardly be regarded as more than a simple coincidence, if it were not borne out by the less striking but equally decisive facts already mentioned. "A carpenter fell into a quarrel with a soldier billeted in his house, and was set upon by the latter with his drawn sword. The wife of the carpenter at first trembled from fear and terror, and then suddenly threw herself furiously between the combatants, wrested the sword from the soldier's hand, broke it in pieces, and threw it away. During the tumult, some neighbours came in and separated the men. Whilst in this state of strong excitement, the mother took up her child from the cradle, where it lay playing, and in the most perfect health, never having had a moment's illness; she gave it the breast, and in so doing sealed its fate. In a few minutes the infant left off sucking, became restless, panted, and sank dead upon its mother's bosom.

The physician who was called in found the child lying in the cradle as if asleep, and with its features undisturbed; but all his resources were fruitless. It was irrecoverably gone." The milk in this striking case must have undergone a change, which gave it a powerful sedative action upon the susceptible nervous system of the infant. *A fretful temper* will lessen the quantity of milk, make it thin and serous, and cause it to disturb the child's bowels, producing fever and griping. *Fits of anger* produce a very irritating milk, followed by griping in the infant, with green stools. *Grief* or *anxiety of mind* often so diminish the secretion as to render other aid necessary for the sustenance of the child. *Fear* and *terror* would seem to produce a powerful sedative effect upon the milk, as proved in Von Ammon's case just quoted, and which in a minor degree I have noticed elsewhere. A knowledge of these facts ought to serve as a salutary warning to a mother not to indulge in, but carefully to guard against, either the exciting or depressing passions.

The quantity and quality of the breast-milk may be affected by other causes. Sometimes *the monthly periods* return while the mother still continues a nurse. This occurrence much impairs the milk in its probable duration, and more or less in its properties at the period itself. The infant sometimes becomes unusually fretful, brings up the milk, and has frequent watery motions, more or less of a spinach-green colour. If this takes place early after delivery, it will in most cases so alter the qualities of the milk as seriously to affect the health of the child, and oblige the mother to transfer it to a wet-nurse. But if it does not occur until the sixth or seventh month, no inconvenience of importance will generally arise. As a general rule, the breast must be withheld from the child as much as possible during its continuance, and artificial food substituted.

The taste and qualities of the milk are easily affected *by diet*. If the mode of living be full and luxurious, the milk may become too rich, having too large a quantity of cream, but without its being otherwise altered in its character. The remedy is simple enough: purgative medicine, once or twice,—plenty of active exercise, and a more spare diet in future. On the other hand, women who labour hard, provided they are well nourished, have abundance of milk; but if their food be scanty in quantity and poor in quality, they soon sink under fatigue and lose their milk. In London, severe attacks of diarrhœa occur in infants at the breast, fairly traceable to *bad porter*. I was called to see an infant at the breast with diarrhœa. The remedial measures had but little effect, so long as the infant was allowed the breast-milk;

but this being discontinued, and artificial food substituted, the complaint was quickly put a stop to. Believing that the mother's milk was impaired from some accidental cause which might now be past, the infant was again allowed the breast; in less than four-and-twenty hours, however, the diarrhœa returned. The mother being a very healthy woman, it was suspected that some unwholesome article in her diet might be the cause; the regimen was accordingly carefully inquired into, when it appeared that porter from a neighbouring publican's had been substituted for their own for some little time past. This proved to be bad,—throwing down, when left to stand a few hours, a considerable sediment; it was discontinued; good sound ale taken instead; the infant again put to the breast,—upon the milk of which it flourished, and never had another attack. Sometimes the breast-milk has a decidedly saline taste; at other times bitter, so that the child (to the astonishment and vexation of the parent, who does not suspect the cause) will turn away from the breast in disgust. In all these cases it will more or less disorder the child; and hence the importance of attention to the diet; particularly the avoidance of salads, pickles, sour fruit, cucumbers, melons, acids, and the like.

*Medicines* will often affect the milk, and in a very striking manner. This has already been alluded to when speaking of aperients, and beyond this does not concern us here, although a very important use is made of the fact in attempting the cure of serious disease which sometimes occurs both in mother and child.

If *pregnancy* take place with the nursing mother, it will so affect the milk as to render suckling injurious to the child. If it occur in the early months, a wet-nurse ought to be obtained.

A *deficiency of milk* will, in some mothers, exist from the earliest weeks after delivery. If this is not quickly remedied by the means already pointed out, a wet-nurse must be obtained. It will be of no avail partially to nurse and partially to feed the infant at this period, and under such circumstances; for if it is not soon lost, it will only live a few months, and be a constant object of anxiety and grief to its parent. The constitution of the mother, in this case, is frequently unhealthy, and the condition into which the child is brought arises from the unwholesomeness of her milk. Women who marry comparatively late in life, and bear children, generally have a deficiency of milk after the third or fourth month: artificial feeding must in part be here resorted to.

Many mothers give themselves unnecessary fatigue in suckling, from the awkward manner in which they hold the child. Until it is old enough to sit while sucking, or the mother is accustomed to raise the child cleverly in her arms to the breast, it is best for



her to lie down when the infant has occasion to suck. At all times, if in bed, the child should take the breast as it lies, and not incommode the mother by obliging her to sit up in bed. When up and nursing, the mother should sit upright and raise the child to her breast, and not bend forward to suckle the infant in her lap. This greatly tires and fatigues the mother, and causes severe pain in her back, without in any degree relieving the child.

Again, a parent should avoid giving one breast more frequently than the other: the infant should be applied to each in its turn. If this is not done, and one breast is suckled more than the other, it becomes much larger than its fellow, and the secretion of milk is not equally promoted in each breast. There is danger, also, if suckled upon one breast only, of the child contracting the habit of squinting, from having its eyes constantly directed to one side. It may also become somewhat crooked, growing unequally, one side of the body not being so muscular as the other.

For direction, upon sore nipples, uncontrollable flow of the milk, and milk abscess, the reader is referred to "Hints to Mothers."

#### THE INJURIOUS EFFECTS TO THE MOTHER AND INFANT OF UNDUE AND PROTRACTED SUCKLING.

As already observed, the period of suckling is, ordinarily, one of the most healthy of a woman's life. But there are exceptions to this as a general rule; and nursing, instead of being accompanied by health, may be the cause of its being materially, and even fatally, impaired. This may arise out of one of two causes: either a parent continuing to suckle too long,—or, from the original powers or strength not being equal to the continued drain on the system. Examples of the first class are met with daily. I refer to poor married women, who nurse their infants eighteen months, two years, or even longer than this, from the belief that by so doing they will prevent pregnancy. The consequences are a state of exhaustion and disorder of the general health, which often leans to most alarming maladies. The second is most frequently met with in delicate women, who, having had two or three children in quick succession, her health suffers, and she has all the symptoms arising from undue suckling, when perhaps the infant at her breast is not more than two or three months old.

Since the health of the mother can be impaired by suckling, she ought not to be in ignorance of the fact; so that she may be

able to recognise the first symptoms, and obtain medical advice before her health be seriously affected.

The *earliest symptom* is a dragging sensation in the back when the child is in the act of sucking, and an exhausted feeling of sinking and emptiness at the pit of the stomach afterwards. This is soon followed by loss of appetite, costive bowels, and pain on the left side. Then the head will be more or less affected; sometimes with much throbbing, singing in the ears, and always some degree of giddiness, with great depression of spirits. Soon the chest becomes affected, and the breathing is short, accompanied by a dry cough, and palpitation of the heart upon the slightest exertion. As the disease advances, the countenance becomes very pale, and the flesh wastes, and profuse night perspirations, great debility, swelling of the ankles, and nervousness, ensue. I have known the retina so weakened as to produce blindness for a time. It is unnecessary, however, to enter into a more full detail of symptoms.

All that it will be useful to say in reference to *treatment* is this; that although much may be done in the first instance by medicine, change of air, cold and sea bathing, yet the quickest and most effectual remedy is to wean the child, and thus remove the cause.

There is another and equally powerful reason why the child should be weaned, or rather have a young and healthy wet-nurse, if practicable. *The effects upon the infant*, suckled under such circumstances, will be most serious. Born in perfect health, and having continued so up to this period, it will now begin to fall off in its appearance; for the mother's milk, both in respect of quantity and quality, will no longer afford due nourishment. Its countenance will become pale, its look sickly and aged, the flesh soft and flabby, the limbs emaciated, the stomach large, and the evacuations fœtid and unnatural. And in a very few weeks, the blooming healthy child will be changed into the pale, sickly, pœvish, wasted creature, whose life appears hardly desirable. The only measure that can save the life, and recover an infant from this state, is that which would previously have prevented it, —a healthy wet-nurse.

If the effects upon the infant should not be so aggravated as those just described, and it subsequently live and thrive, there will be a tendency in such a constitution to scrofula and consumption, to manifest itself at some future period of life, undoubtedly acquired from the parent, and dependent upon the impaired state of her health at the time of its suckling. A wet-nurse early resorted to will prevent this.



It will be naturally asked, for how long a period a mother ought to perform the office of a nurse? No specific time can be mentioned; and the only way in which the question can be met is this—no woman, with advantage to her own health, can suckle her infant beyond twelve or eighteen months; and at various periods between the third and twelfth month, many women will be obliged partially or entirely to resign the office.

*The monthly periods* generally reappear from the twelfth to the fourteenth month from delivery; and when established, as the milk is found invariably to diminish in quantity, and also to deteriorate in quality, and the child is but imperfectly nourished, it is positively necessary in such instances at once to wean it.

#### WEANING.

*At what time.*—The time when weaning is to take place must ever depend upon a variety of circumstances, which will regulate this matter, independently of any general rule that can be laid down. The mother's health may, in one case, oblige her to resort to weaning before the sixth month, and, in another instance, from the delicacy of the infant's health, to delay it beyond the twelfth. Nevertheless, as a general rule, both child and parent being in good health, weaning ought never to take place earlier than the ninth (the most usual date), and never be delayed beyond the twelfth month.

I should say further, that if child and parent are both in vigorous health, if the infant has cut several of its teeth, and been already accustomed to be partially fed, weaning ought to be gradually accomplished at the ninth month. On the other hand, if the child is feeble in constitution, the teeth late in appearing, and the mother is healthy and has a sufficient supply of good milk, especially if it be the winter season, it will be far better to prolong the nursing for a few months. In such a case, the fact of the non-appearance of the teeth indicates an unfitness of the system for any other than the natural food from the maternal breast. It should never be effected while the child is suffering under the irritation of teething; it will derange the bowels and perhaps induce convulsions. And again, if the infant is born of a consumptive parent, and a healthy and vigorous wet-nurse has been provided, weaning should most certainly be deferred beyond the usual time; carefully watching, however, that neither nurse nor child suffer from its continuance.

*The mode.*—It should be effected gradually. From the sixth month most children are fed twice or oftener in the four-and-

twenty hours; the infant is, in fact, therefore, from this time, in the progress of weaning; that is to say, its natural diet is partly changed for an artificial one, so that when the time for *complete weaning* arrives, it will be easily accomplished, without suffering to the mother, or much denial to the child. It is, however, of the greatest importance to regulate the quantity and quality of the food at this time. If too much food is given (and this is the great danger), the stomach will be overloaded; the digestive powers impaired; and if the child is not carried off suddenly by convulsions, its bowels will become obstinately disordered; it will fall away from not being nourished, and perhaps eventually become a sacrifice to the over-anxious desire of the parent and its friends to promote its welfare. The kind of food proper for this period, and the mode of administering it, are detailed in the section on "Artificial Feeding."

Much exercise in the open air (whenever there is no dampness of atmosphere) is highly necessary at this time; it tends to invigorate the system, and strengthens the digestive organs, and thus enables the latter to bear without injury the alteration in diet.

*Drying up the milk.*—It may be necessary to dry up or "backen the milk," as it is popularly called, *directly after delivery*—from the delicate health of the mother,—from local defect, the nipple, for instance, being too small, or obliterated by the pressure of tight stays,—and from death of the infant, or some equally urgent cause.

Now it is a very frequent practice to apply cold evaporating lotions to the breast for this purpose. It is true they may produce a rapid dispersion of the milk; but they ought never to be resorted to, as they frequently give rise to symptoms of an alarming and dangerous character. The best and safest local application consists in the following liniment:—*Compound soap liniment, three ounces; laudanum, three drachms; camphor liniment, one drachm.* Or, if this is found too irritating, *compound soap liniment* alone. Either of these liniments must be applied warm, and constantly, by means of a layer or two of linen or flannel, covered by a piece of oiled silk, and the breast gently pressed or rubbed for five or ten minutes, every four or five hours, with warm almond oil.

Sometimes the skin is so thin and sensitive, that even the compound soap liniment proves too stimulating, and covers the breast with an irritable eruption. In these cases bread-and-water poultices must be substituted, but the warm almond oil must also be used as directed in the former instances.

While the breasts remain only moderately hard, easy, and but little distended with milk, they must not be emptied; for this would encourage further secretion, and they would soon fill again. If, however, they become very hard and painful, and give much uneasiness from their distension, they must be partially emptied, so as just to relieve the distension—nothing more; and this is to be repeated as often as it is absolutely necessary. A gentle saline aperient should be taken every morning, and, if necessary, at night, the object being to keep the bowels slightly relaxed. The diet must be very scanty, and solid nourishment only taken. If, however, the thirst is distressing, it must be allayed by frequently washing out the mouth with toast and water, and an orange or two, or a few ripe grapes, may be taken in the course of the day. Following up this plan, the distress arising from the extreme distension of the breasts, if it was present, will be removed, although several days will transpire before the milk is thoroughly dispersed, or the remedies can be discontinued; and a sensation described by females as of “a draught of milk” in the breasts, will sometimes be felt two or three times a day for weeks afterwards.

In reference to drying up the milk *at the time of weaning*, from the circumstance of the child being partially fed for some time before it is completely weaned, the mother will experience little trouble in dispersing it. She must, however, not neglect to take opening medicine, not only to assist the foregoing object, but also to prevent that depression of spirits, lassitude, loss of appetite, and general derangement of health, which so frequently follow weaning when these medicines are omitted. If the breasts should continue loaded, or indeed painfully distended, the aperient must not only be used to keep the bowels gently relaxed, but the diet must be diminished in quantity, and solid nourishment only taken. The breasts, too, if painfully distended, must be occasionally drawn, but only just sufficiently to relieve the distension; they must also be rubbed for five or ten minutes, every four or five hours, with the following liniment, previously warmed:—*Compound soap liniment, one ounce and a half; laudanum, three drachms.*

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## OF WET-NURSES.

### CHOICE OF A WET-NURSE.

ILL health and many other circumstances may prevent a parent from suckling her child, and render a wet-nurse necessary. Now,

although she will do wisely to leave the choice of one to her medical attendant, still, as some difficulty may attend this, and as most certainly the mother herself ought to be acquainted with the principal things to be attended to in the selection of a good nurse, it will be well to point out in what they consist.

The first thing to which a medical man looks, is the general health of the woman: next, the condition of her breast,—the quality of her milk—its age and her own; whether she is ever unwell while nursing; and, last of all, the condition and health of the child.

*Is the woman in good health?*—Her general appearance ought to betoken a robust constitution, free from all suspicion of a strumous character or any hereditary taint; her tongue clean; and digestion good; her teeth and gums sound and perfect; her skin free from eruption, and her breath sweet.

*What is the condition of her breast?*—A good breast should be firm and well-formed; its size not dependent upon a large quantity of fat, which will generally take away from its firmness, giving it a flabby appearance, but upon its glandular structure, which conveys to the touch a knotted, irregular, and hard feel; and the nipple must be perfect, of moderate size, but well developed.

*What is the quality of the milk?*—It should be thin, and of a bluish-white colour; sweet to the taste; and when allowed to stand, should throw up a considerable quantity of cream. Dropped in water, it should form a light cloudy appearance, and not sink at once to the bottom in thick drops.

*What is its age?*—If the lying-in month of the patient has scarcely expired, the wet-nurse to be hired ought certainly not to have reached her second month. At this time, the nearer the birth of the child, and the delivery of its foster-parent, the better. The reason for which is, that during the first few weeks the milk is thinner and more watery than it afterwards becomes. If, consequently, a newly-born infant be provided with a nurse who has been delivered three or four months, the natural relation between its stomach and the quality of the milk is destroyed, and the infant suffers from the oppression of food too heavy for its digestive power. In fact it has been observed to be very injurious. On the other hand, if you are seeking a wet-nurse for an infant of four or five months old, it would be very prejudicial to transfer the child to a woman recently delivered; the milk would be too watery for its support, and its health in consequence would give way.

*The nurse herself should not be too old.*—A vigorous young

woman from twenty-one to thirty admits of no question. And the woman who has had one or two children before is always to be preferred, as she will be likely to have more milk, and may also be supposed to have acquired some experience in the management of infants.

*Inquire whether she is ever unwell while nursing.*—If so, reject her at once. You will have no difficulty in ascertaining this point; for this class of persons have an idea that their milk is *renewed*, as they term it, by this circumstance, monthly; and, therefore, that it is a recommendation, rendering their milk fitter for younger children than it would otherwise have been. It produces, however, quite a contrary effect; it much impairs the milk, which will be found to disagree with the newly-born child, rendering it fretful from the first. After a time it is vomited up, and produces frequent watery dark green motions.

Last of all, *what is the condition of the child?*—It ought to have the sprightly appearance of health, to bear the marks of being well nourished, its flesh firm, its skin clean and free from eruption. It should be examined in this respect, particularly about the head, neck, and gums.

If a medical man finds that both mother and child answer to the above description, he has no hesitation in recommending the former as likely to prove a good wet-nurse.

The principal points which the parent must investigate for herself (independent of the medical attendant's inquiries), have reference to the *moral qualifications* of the applicant; and if there is found to be any defect here, however healthy or otherwise desirable, her services ought to be declined. Temperance, cleanliness, a character for good conduct, fondness for children, and aptness in their management, are among the most important requisites. An amiable disposition and cheerful temper are also very desirable; for of course the remarks made in the preceding chapter, on the injurious influence of mental disturbance on the breast-milk of the parent, apply with equal force to that of the wet-nurse.

It is unnecessary to allude to other qualities which a woman who is sought as a wet-nurse should possess; they will naturally suggest themselves to any thoughtful mind.

#### DIET OF A WET-NURSE.

The diet should not differ much from that to which the individual has been accustomed; and any change which it may be necessary to make in it should be gradual. It is erroneous to suppose that women when nursing require to be much more highly fed than at other times: a good nurse does not need this, and a bad



one will not be the better for it. The quantity which many nurses eat and drink, and the indolent life which they too often are allowed to lead, have the effect of deranging their digestive organs, and frequently induce a state of febrile excitement, which always diminishes, and even sometimes altogether disperses, the milk. It will be always necessary for the mother to be watchful, lest the wet-nurse overload her stomach with a mass of indigestible food and drink. She should have a wholesome mixed animal and vegetable diet, and a moderate quantity of malt liquor, *provided* it be found necessary.

As I have before said, a very prevailing notion exists that porter tends to produce a great flow of milk. In consequence of this prejudice, the wet-nurse is often allowed as much as she likes; a large quantity is in this way taken, and after a short time so much febrile action excited in the system, that instead of increasing the flow of milk, it diminishes it greatly. Sometimes, without diminishing the quantity, it imperceptibly but seriously deteriorates its quality. For instance, a wet-nurse became necessary for an infant two months old, and a healthy young woman was obtained. At first the nurse's milk seemed to suit the child, and every thing went on well for three weeks. At this time I was sent for, the infant having had diarrhœa for three or four days, with green motions and occasional vomiting. I looked for the cause, and, amongst other inquiries, to the health of the nurse. I was told that she was in perfect health; but perceiving that she looked ruddy, and more full in the face than heretofore, I inquired about the quantity of beverage allowed, and found it exceeded two pints of porter daily. I then prescribed—for the infant, no medicine; for the nurse, one pint of porter only. As the patient lived some little distance from town, I did not see the child for three days; it was then somewhat better, but still not well. I directed the malt liquor to be discontinued altogether, and the nurse to have the shower-bath every morning, and plenty of out-door exercise. In three days more the infant was perfectly well, and the nurse had still an ample supply of milk, which now agreed with and nourished the child.

As a *general rule*, porter, wine, or any stimulant, is quite as unnecessary for the wet-nurse as for the nursing mother, if she be in sound and vigorous health. There may be cases benefited by the moderate use of malt liquor, but these are the exceptions. If taken, three half-pint tumblers are as much as any nurse ought to be allowed, and if she requires more, either it will be injurious, or she is unfit for her office. I very much suspect that the process of teething in some cases is rendered painful and difficult, by



the stimulant taken by the nurse ; the child, in fact, pays in suffering for the pampering of the nurse.

#### GENERAL DIRECTIONS.

The nurse should take exercise daily in the open air ; nothing tends more directly to maintain a good supply of healthy milk, and the best wet-nurse would soon lose it, if constantly kept within doors. Sponging the whole body with cold water with bay salt in it, every morning, should be insisted upon, if possible ; it preserves cleanliness, and greatly invigorates the system. United with this, the nurse should rise early, and also be regularly employed during the day in some little portion of duty in the family, an attendance on the wants of the child not being alone sufficient.

For some time after the wet-nurse enters upon her duties, the mother should closely superintend her management of the child ; more or less this will be advisable throughout the whole period of the wet-nurse's suckling, but it will be particularly called for until the nurse has deservedly secured the mother's confidence and respect. If the nurse has been judiciously chosen, there is no doubt she will endeavour to act conscientiously and rightly, but it is too much to expect, remembering the station of life from which she has been taken, that she will possess the necessary knowledge. Indeed, if she has had children previously, you will most probably have to combat with many existing prejudices, which will render such vigilance and superintending care the more necessary. Give from day to day the instructions required, and go frequently and unexpectedly to the nursery, and see that your directions are scrupulously regarded, with that cheerfulness and tenderness which alone can and ought to satisfy a mother.

It will be well to add two or three cautions which have immediate reference to this class of persons. As the months advance, it may happen that the nurse's milk becomes insufficient for the demands of the child ; and, unless she be a woman of good principles, there will be a danger of her hiding this circumstance from the parent, lest she should lose her situation, and she will secretly supply the deficiency with some artificial food, made in secret, and therefore badly, unfit for the child, and quickly causing suffering and disturbance to its system. On the other hand, a very healthy and very ignorant woman, with a great abundance of milk, is now and then met with, whose great aim will be to make the child as fat as possible ; and she will not only urge the child to take breast-milk all day long, but give artificial food too, and

sometimes even a portion of her own beverage, malt liquor. As a consequence, either the child's stomach rebels against this extraordinary system of repletion, and constantly vomits up the over supply, having, it may be, repeated attacks of diarrhœa, which after a while seriously affect its health,—or the wishes of the nurse are realized, and the child does become excessively fat, and is placed thereby on the brink of disease, which, if it takes place, the chances of recovery are greatly diminished. Again, the monthly periods in these nurses will sometimes after a while reappear, deteriorating the quality and diminishing the quantity of the milk,—a result of which they are generally aware, and therefore they often attempt to conceal the fact. The course to be taken will depend upon the date when this function recurs: if it be early in the nursing, the child being yet very young, it will be sure to suffer, and the nurse must be changed;—but if it does not take place until the seventh or eighth month is passed, it will scarcely affect the child, and all that will be required will be to keep it as much as possible from nursing while the woman continues unwell, substituting for the breast-milk artificial food.

A wet-nurse should never be allowed to have medicine of any kind at her command to administer to the child whenever she may think fit: and it is right that a parent should be aware that an unprincipled woman will give laudanum in one or other of its preparations to quiet a restless child, and secure for herself a good night's repose. If it should at any time happen that the nurse's rest is disturbed from this cause, the exhaustion which is naturally felt the following day must not be met by the frequently adopted remedy of an extra supply of porter, but by rest: she must be allowed to lie down for an hour or so, the nurse-maid taking charge of the child in the interval. Sleep will restore the strength, and thus increase the amount and improve the quality of the breast-milk, while the stimulant would injure both.

When there are children already in a family, there is danger in many ways of the wet-nurse deranging the order of the nursery. The mother should at the first assign her place and duties, and see that she keeps the one and performs the other. If there is an upper nurse, the wet-nurse in a certain sense must be her assistant, and take the second place, as it is termed. She will always do her duty to the baby, for her affections will quickly become engaged; but there will be an unwillingness to conform to nursery regulations, unless enjoined from the first, which may cause great discomfort, and have a bad influence upon the children. If the tone and manner in which injunctions are given imply both firmness and kindness, the willing co-operation of the wet-nurse may

be secured, who must not be looked on merely as a living dairy, without love of esteem or desire of approbation.

## ARTIFICIAL FEEDING.

Extreme delicacy of constitution, diseased condition of the frame, defective secretion of milk, and other causes, may forbid the mother suckling her child; and unless she can perform this office with safety to herself and benefit to her infant, she ought not to attempt it. In this case a young and healthy wet-nurse is the best substitute; but even this resource is not always attainable. Under these circumstances the child must be brought up on an artificial diet—"by hand," as it is popularly called. To accomplish this, however, with success, requires the most careful attention on the part of the parent. It is at all times attended with risk, particularly in large cities. Upon this point Dr. Donn  remarks:—"Ce mode d'alimentation que je condamne absolument et sans r serve   Paris et dans les villes, et que je tol re   peine dans les campagnes, malgr  les exemples favorables que l'on peut citer: ces succ s isol s ne prouvent rien. Je ne pr tends pas qu'il soit impossible d' lever certains enfants de cette mani re; mais c'est mettre gratuitement une foule de chances contre soi, dans une entreprise qui, dans les circonstances les plus avantageuses, pr sente toujours d'assez grandes difficult s par elle-m me."\* It is of great importance, therefore, that the parent superintend the dietetic management of the child herself—at all events, for the early months—and that the rules laid down for her guidance be strictly followed out.

## THE FOOD SUITABLE UNTIL THE FIRST TEETH APPEAR.

The kind of artificial nourishment most suited to the infant will be that which is most like the breast-milk, viz., the milk of animals: the ass, the cow, the ewe, and goat. The milk of the cow is in most familiar use, and the ass next, but all are employed more or less for the above purpose in various parts of the world. The milk of all animals is composed of the same ingredients, but their proportions vary considerably,—a fact of much practical importance in guiding our selection and preparation of it as food for our children, when good human milk cannot be obtained. In general terms, milk may be said to contain all the elements required for the maintenance and development of the life of the young animal, viz.: 1. Casein or cheese, which affords matter of

\* Donn  sur l'Allaitment, p. 170.

nutrition and growth; 2. Butter, which supplies fat, and, united with 3. Sugar, yields the carbon and hydrogen, which produce animal heat by their combustion; and, 4. Saline matters, necessary for the development of the osseous system. The relative proportions of the different ingredients in the milk of various animals, in 100 parts, are as follows:—

Constituents.	Milk of the				
	Woman.	Ass.	Cow.	Ewe.	Goat.
Casein	2.50	1.82	4.48	4.50	4.02
Butter	5.18	0.11	3.13	4.20	3.32
Sugar of milk }	6.52	6.08	4.77	5.00	5.28
Various salts }		0.34	0.60	0.68	0.58
Water	85.50	91.65	87.02	85.62	86.80

From this table it will be seen that no milk more nearly approaches that of woman than the sheep and goat. Both possess, however, a larger proportion of casein, which forms a very dense curd, and the milk of the goat is tainted with the peculiar odour of the animal—both circumstances objectionable: the one making the milk difficult of digestion to the child, and the other disagreeable to it. The same remark in reference to casein applies to the milk of the cow, but it does not possess so much butter, and by dilution may be brought to answer very well for infant's food. In some respects, however, there is a greater similarity between the milk of the woman and that of the ass, and in the early months, accordingly, we find it the most suitable artificial food that can be chosen.

When *ass's* milk is employed, for the first ten days, it should be mixed with an equal part of boiling water; no sugar is necessary, as this exists in abundance, as the table shows. When the ten days have expired two-thirds milk and one-third water will be the proportions; and a few weeks later the milk should be pure. It must be given at the same temperature as the breast-milk, viz., from 96° to 98°; this is best effected by always adding the water in a boiling state, and when the latter is discontinued, by placing the milk in boiling water. In hot weather care must be taken that the milk is not affected by it; and when practicable it should be given warm from the animal. It should never be mixed with the water till wanted, and no more made than will be taken by the child, for it must be prepared fresh at every meal. If convenience will permit, an ass should be kept for the child; the foal muzzled, and the forage of the mother carefully attended to, or its milk will disagree with the infant. If this plan cannot be

adopted, then, if possible, the animal should be brought to the door of the house, night and morning, and there milked.

*Cow's* milk, in the early weeks, is objectionable from the large proportion of casein it contains. If, however, it is used, for the first ten days one-third cow's milk and two-thirds of boiling-water are the proportions, sweetening the mixture with a small quantity of loaf sugar, as it is rather deficient in this milk. Then, for the next four or five months, equal parts of milk and water, and at the expiration of this time, which brings us to about the sixth month, pure milk. The same care in preparing this food must be observed as with the ass's milk. In large cities it is a difficult thing to obtain pure and wholesome cow's milk. Much of it is supplied from cows, which, fed in stalls, never breathe the pure air, and becoming diseased, (scrofulous matter is found deposited on their lungs,) they produce unhealthy milk,—or if it comes from the outskirts of the city, however pure and wholesome when drawn from the udder, it is afterwards so diluted with water, and adulterated with starch, flour, chalk, and other substances, as to render it almost as innutritious and unwholesome as the diseased milk itself. Both are most unfit for the delicate and susceptible stomach of the infant. There is no doubt that this circumstance is the fruitful source of disordered health to children artificially fed in large cities, and, with a deficiency of pure air, of the great mortality which takes place in the early months.

It is hardly necessary to allude again to the milk of the *goat* and *ewe*; they are both much employed in other countries, but seldom in this. In quality they are richer than any other, and require, in the early weeks of the child's life, considerable dilution, with a small addition of sugar.

*Milk* then, much diluted in the early weeks, and less and less so as they advance, accommodating the strength of the aliment to the increasing digestive powers of the infant, forms the best artificial diet that can be given until two or three teeth are cut. Children nourished exclusively upon this simple food will be found to enjoy more perfect health, and thrive far better than upon any other diet that can be given. Unfortunately this is not the popular belief, and, in the earliest days of the child, mothers are too much in the habit of giving thick gruel, panada, biscuit food, and such matters, thinking that a diet of a lighter and thinner kind will not nourish. This is a great mistake, for these preparations are much too solid; they overload the stomach, and cause indigestion, flatulence, and griping. These create a necessity for purgative medicines and carminatives, which again weaken digestion, and, by unnatural irritation, perpetuate the evils which



rendered them necessary. Thus many infants are kept in a continual round of repletion, indigestion, and purging, with the administration of cordials and nareotics, who, if their aliment were in quantity and quality suited to their digestive powers, would need no aid from physic or physieians.

It will occasionally happen, however, that every kind of milk disagrees with the stomach of the child. If such a case occur, arrow-root, sago, semolina, ground rice, and barley, or grit gruel, either of these well boiled in water, with the addition of a teaspoonful of cream to four ounces of one or other of these preparations, and a little sugar and salt may be given. In such children if the flesh be soft and flabby, after a few months the cream may be discontinued, and equal parts of one of the foregoing preparations, and some animal broth, as chicken or mutton broth, or beef tea. All this, however, must be done with considerable care and caution. In the first weeks the food must be very thin, the consistence of cream, and always passed through a fine sieve before it is poured into the sucking-bottle, and afterwards, if animal broth forms part of the diet, its effect upon the system must be watched; for it must always be kept in mind that, before the first teeth are cut, the exhibition of this diet forms the exception and not the rule to the plan ordinarily to be pursued.

*The mode of administering the food.*—There are two ways—by the spoon, and by the nursing-bottle. The first is objectionable at this period, inasmuch as the power of digestion in infants is very weak. In the natural mode of nourishment, by repeated acts of sucking, provision is made for the *slow* introduction of food into the stomach of the child. In this act a great quantity of saliva is secreted, which, mixing with the milk, passes down into the stomach, and there greatly aids digestion. This process of nature then is to be emulated as far as possible; and for this purpose the food should be imbibed by suction from a nursing-bottle; it is thus obtained slowly, and the suction employed secures the mixture of a due quantity of saliva. The flat-glass nursing-bottle is too well known to need description. It should be of glass, that being transparent we may be assured of its perfect cleanliness—that the amount of food taken at each meal may be accurately measured—that the nurse may see that it is not taken too fast, and when the bottle is emptied, that she may no longer allow the child to suck. The narrow neck of the bottle, which is about the size of the nipple, with a small orifice, is covered by an artificial teat, through which the infant sucks the food. Various kinds are used: a prepared cow's teat, a piece of



washed chamois leather, or a few folds of fine soft linen ; whichever is preferred, it must be secured firmly to the bottle with thread, and care must be taken that its extremity does not extend beyond its apex more than half or three-quarters of an inch ; for if it projects more than this, the child will get the sides of the artificial teat so firmly pressed together between its gums, that there will be no channel for the milk to pass. It must be pierced with two or three very fine openings, and lest the milk should flow through too rapidly, a small conical piece of sponge must be placed in the teat. After every meal, if any food is left, it must be thrown away, the teat and sponge carefully washed with hot water, and the bottle scalded out ; of the latter, there should always be two in the nursery, to be used alternately. These precautions are very important, otherwise the food will be tainted, and the child's bowels become deranged. The most perfect cleanliness is absolutely essential to the success of this plan of rearing children. The most cleanly and convenient apparatus of all is a cork-nipple fixed in the sucking-bottle, upon the plan of Mons. Darbo of Paris. The cork being of a particularly fine texture, is supple and elastic, yielding to the infant's lips while sucking, and is much more durable than the teats ordinarily used.

*Of the quantity and frequency of giving food.*—These must be regulated by the age of the child and its digestive power. In the early weeks, as in ordinary nursing, the quantity must be small, say six or eight tablespoonfuls, and the supply more frequent than afterwards, as the stomach can bear only a small amount of nourishment at a time. As the child grows older, the quantity must be gradually increased, and a little experience will soon enable a careful and observing mother to determine the amount required. The frequency (after the first month) as a general rule should be fixed at about every four hours ; this will allow a sufficient interval between each meal to insure the digestion of the previous quantity. If this rule is not observed, the process of digestion will be interrupted, and the food passing along undigested, and fermenting, will derange the bowels without nourishing the child. The great error in rearing the young is over-feeding. It may, however, be easily avoided by the parent pursuing a systematic plan with regard to the hours of feeding, and then only yielding to the indications of appetite, and administering the food slowly, in small quantities at a time. This is the only way effectually to prevent indigestion, bowel complaints, the irritable condition of the nervous system so common in infancy, and to secure the child healthy nutrition and consequent strength

of constitution. If it be found requisite to give aperients and astringents, antacids and carminatives, frequently, there is something faulty in the management of the diet, however perfect it may seem.

*The posture of the child when fed.*—It must not receive its meals lying. The head should be raised on the nurse's arm, the most natural position, and one in which there will be no danger of the food going the wrong way, as it is called. After each meal the child should be put into its cot, or repose on its mother's knee for half an hour or so. The practice of *dandling* and *jolting* the infant soon after taking nourishment is hurtful. Rest is essential to digestion, as exercise is important at other times for the promotion of health. Nature constantly verifies the truth of this remark. All animals manifest an inclination for repose and quietude after a full repast; and experience has shown that the process of digestion is impeded by strong mental or corporeal exercise or agitation, immediately after a meal.

#### THE FOOD SUITABLE AFTER THE FIRST TEETH HAVE APPEARED.

As soon as the child has got any teeth, and about the sixth or seventh month, one or two will make their appearance, the artificial food may be increased in quantity and strength. If the child has hitherto been living upon cow's milk and water, the latter may be discontinued, and pure milk alone given, to be continued for a month or two longer, if the child continues to thrive. More solid food, however, will now in most cases be demanded, such as the mixture of some farinaceous preparation with milk. The following, in the order in which they stand, may be resorted to, and that fixed upon which suits best:—

*Hard's Farinaceous Food.*—Mix a tablespoonful with a small quantity of cold water, add half a pint of boiling water, constantly stirring, then boil it eight minutes, strain through a sieve, add a small quantity of pure and fresh cow's milk, loaf sugar, and a few grains of salt. This preparation is recommended in preference to biscuit powder, and many other articles of diet of this class, from the deservedly high character it has obtained; and so long as it continues to be carefully prepared by the maker, it will be found a very valuable article of food for infants.

*Tops and Bottoms.*—Steep in boiling water a couple for ten minutes, add a little pure and fresh cow's milk, strain through a sieve, and mix with it a few grains of salt. Sometimes this food agrees better when prepared as follows:—Have a saucepan on

the fire with exactly the quantity of water required; when fast boiling throw two of these into it; let it boil five or six minutes; it will then be a clear smooth jelly, and when strained, nothing will remain in the sieve; thin it with a little fresh and pure cow's milk, and add a few grains of salt.

*Sago*.—Take a dessertspoonful of pearl sago, macerate it for two hours in half a pint of water in a pan on the hob, and then boil it for a quarter of an hour, stirring it well;—strain through a sieve, add cow's milk and a few grains of salt, and sweeten with a little loaf sugar.

*Arrow-root*.—Take a dessertspoonful of arrow-root powder, and carefully mix it with a little cold water in a basin with a spoon; then pour upon it half a pint of boiling water, assiduously stirring until it is thoroughly mixed;—boil it for five minutes, add fresh cow's milk and a few grains of salt, and sweeten with a little loaf sugar.

*Tous les Mois*.—This food is to be prepared in the same manner and proportions as the arrow-root.

When *one or two of the large grinding teeth* have appeared, beef tea, chicken, mutton, or veal broth may be given once in the day. The ordinary mode of making these preparations, that of pouring *boiling* water on the meat, is objectionable. It has been proved experimentally that boiling water allowed to act even for as long as five hours on finely chopped flesh, does not dissolve more than the fifth part of the matters soluble in cold water. During maceration in cold water an interchange takes place between the juices of the meat and the cold water external to it, and lasts until there is nothing more to be got out of the meat. While, on the old method, the surface of the latter becomes hardened by the heat, and the water is prevented from permeating to the interior of each separate mass; the nutritious juices becoming sealed up by the action of the heat, instead of passing out of the meat into the water. The plan to be adopted is as follows:—Take a pound of lean beef, free from fat and separated from the bones, chop it up as mince meat; pour upon it a pint of cold water, let it stand for two or three hours, and then slowly heat to boiling, and after boiling briskly for a minute or two, strain the liquid through a fine sieve or cloth, and add a sufficiency of salt. The same plan may be adopted with mutton, veal, or chicken.

As the child advances in age, that is to say, after a month or two from the time we are now referring to, and as an introduction to the use of a more completely animal diet, a portion, now and then, of a soft-boiled egg may be given; and by and by a small bread-pudding, made with one egg in it, may form the dinner

meal. Nothing is more common than for parents, during this period, to give their children solid *animal food*. This is a great and mischievous error. It has been well said by Sir James Clark, that "to feed an infant with animal food before it has teeth proper for masticating it, shows a total disregard to the plain indications of nature, in withholding such teeth till the system requires their assistance to masticate solid food. And the method of grating and pounding meat, as a substitute for chewing, may be well suited to the toothless octogenarian, whose stomach is capable of digesting it; but the stomach of a young child is not adapted to the digestion of such food, and will be disordered by it." Upon the same subject Dr. John Clarke observes in his Commentaries:—"If the principles already laid down be true, it cannot reasonably be maintained that a child's mouth without teeth, and that of an adult, furnished with the teeth of carnivorous and graminivorous animals, are designed by the Creator for the same sort of food. If the mastication of solid food, whether animal or vegetable, and a due admixture of saliva, be necessary for digestion, then solid food cannot be proper when there is no power of mastication. If it is swallowed in large masses, it cannot be masticated at all, and will have but a small chance of being digested; and in an undigested state it will prove injurious to the stomach and to other organs concerned in digestion, by forming unnatural compounds. The practice of giving solid food to a toothless child is not less absurd, than to expect corn to be ground where there is no apparatus for grinding it. That which would be considered as an evidence of idiotism or insanity in the last instance, is defended and practised in the former. If, on the other hand, to obviate this evil, the solid matter, whether animal or vegetable, be previously broken into small masses, the infant will instantly swallow it, but it will be unmixed with saliva. Yet in every day's observation it will be seen that children are so fed in their most tender age; and it is not wonderful that present evils are by this means produced, and the foundation laid for future disease."

During the period of infancy to which the foregoing plan of diet refers, viz., from the sixth month to the termination of the second year, it must be constantly kept in mind that the important process of *teething* is going on, and that as this is commonly connected with more or less of disorder of the system, any error in diet is to be most carefully avoided. For while it is true, that in the strong and healthy infant who has been nursed upon the breast, and not tasted artificial food until this period, disorder will be scarcely perceptible; so happy an exemption cannot be

anticipated for the child that has been nourished upon artificial food alone from the first hour of its birth. Teething under such circumstances is always attended with more or less of disturbance of the frame, and disease of the most dangerous character sometimes ensues. It is at this age, too, that all infectious and eruptive fevers are most prevalent; worms often begin to form, and diarrhœa, thrush, rickets, and cutaneous eruptions manifest themselves, and strumous disease is originated or developed. A judicious management of diet will do much to prevent these complaints, and mitigate their violence, if they do occur.

If at any time *the artificial food disagrees* with the infant, causing the stomach and bowels to be disordered, the parent must in the first instance seek to correct this by an alteration in the diet, rather than by medicine. Much may be done by changing the nature, and sometimes by simply diminishing the quantity, of the food. A *diarrhœa, or looseness of the bowels*, may frequently be checked by giving, as the diet, sago thoroughly boiled in very weak beef-tea, with the addition of a little milk. The same purpose is sometimes to be answered by two-thirds of arrow-root, with one-third of milk; or, for a few days, arrow-root made with water only; or, if these fail, Hard's Farinaceous Food mixed with boiled milk. *Costiveness* of the bowels may frequently be removed by changing the food to tops and bottoms steeped in boiling water, and a small quantity of milk added. Or Densham's Farinaceous Food (which is a mixture of three parts of the best wheaten flour and one part of the best barley-meal) may be used. The barley makes this preparation somewhat laxative. Mix a tablespoonful with a small quantity of cold water, add half a pint of boiling water, constantly stirring, then boil eight minutes, strain through a sieve, add a small quantity of unboiled, pure, and fresh cow's milk, a little loaf sugar, and a few grains of salt. *Flatulence and griping* generally arise from an undue quantity of food, which passing undigested into the bowels, they are thus irritated and disturbed. This may be cured by abstinence alone. The same state of things may be caused by the food being over-sweetened—sometimes from its not being prepared fresh at every meal, or even from the nursing-bottle or vessel in which the food is given not having been perfectly clean. In this case weak chicken broth, or beef-tea freed from fat, and thickened with soft-boiled rice or arrow-root, may be given.

It is a grievous mistake for a mother to resort to medicine upon every slight derangement of the digestive system. Calomel, and remedies of a like kind, "the little powders of the nursery," ought not to be given on every trivial occasion. By the above



powerful drug, given in this way, more mischief has been effected, and positive disease produced, than would be credited. Purgative medicines, especially, ought at all times to be exhibited with caution to an infant, for so delicate and susceptible is the structure of its alimentary canal, that disease is but too frequently caused by that which was resorted to in the first instance as a remedy. The bowels should always be kept free, and in a healthy condition; but then it must be by the mildest and least irritating means.

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## DIET OF CHILDHOOD.

FROM THE SECOND YEAR TO THE EIGHTH.

Childhood, as has been before intimated, extends from about the second year to the seventh or eighth. A careful management of diet during this period of life is essential. It is difficult, however, to lay down any precise rules, as they should be adapted, in every case, to the particular constitution concerned. There are, however, certain general principles which must be acted upon, and which can easily be modified by a judicious and observant parent, as constitution and circumstances may require. I will first give some general directions, applicable more or less to *all* children, and then speak separately of the various articles which usually form a part of the diet of this period. From the whole I trust the parent will gather the information suited to the particular constitution of each of her children.

### GENERAL DIRECTIONS.

The diet of the *latter* months of infancy is still to be continued, but with the important addition of *animal food*, which the child has now got teeth to masticate. This must be given in small quantity—it should be of the lightest quality—at first only allowed on alternate days, and even then its effects must be carefully watched, as all changes in the regimen of children should be gradual.

The meals should be given at intervals of about four hours: thus,—*breakfast* between seven and eight o'clock, to consist of tops and bottoms, steeped in boiling water, a little fresh and pure cow's milk added, as also a few grains of salt, and loaf-sugar to sweeten, if necessary;—or pour upon some bread just enough boiling water to soften it, cover it up for a minute or two in the



steam, then add the fresh milk, a little salt, and sweeten with sugar;—or oatmeal porridge and milk is sometimes to be preferred; it is unstimulating, easily digested, contains a considerable proportion of nutriment, and usually acts slightly on the bowels. *Dinner* about twelve o'clock; to consist, every other day, of a small quantity of animal food (chicken, fresh mutton, or beef, being the only meats allowed), with a little bread and water; on the alternate days, a well-boiled rice and milk pudding, or a plain bread, sago, tapioca, or arrow-root pudding, containing one egg; or farinaceous food, with beef tea. The *afternoon meal*, about four o'clock, the same diet as formed the breakfast. At *seven*, a little arrow-root, made with a very small proportion of milk, or a biseuit, or a crust of bread, after which the child should be put to bed.

As the child grows older, the quantity at each meal should be increased, and the quality somewhat altered. Pure milk, boiled or not, as it is found best to agree, may with bread form the breakfast and afternoon meals. And at dinner, meat and bread, with a small quantity of vegetable, and toast and water, may be taken daily.

And now the child should be taught a golden rule in connexion with his diet, which, if it only once becomes a *habit*, will be of the most essential service to his health as long as he lives: he must be taught to take his food slowly, to retain it in his mouth long, and swallow it tardily; and to take nothing in the intervals of his meals. The mother must carefully, day by day, attend to the quality and quantity of the food given. She will be amply rewarded by the health of her children, and their freedom from disease. I might cite many instances to prove the truth and importance of the foregoing remarks, and to show how fruitful of evil is their neglect. I select the following case:—I was sent for at nine o'clock at night, to visit a child supposed to be dying. I found a fine boy, four years old, lying on his back in bed in a violent fit of convulsions; the front and upper part of his night-dress, shirt, and pillow-case covered with a large quantity of unmasticated and undigested food which had been vomited a short time before. It appeared that he had been put to bed at eight o'clock, apparently in good health, and that about an hour afterwards his brother, lying by his side, had been awoken by a piercing and loud cry, when the little patient was found by his father in convulsions. A succession of fits continued till four in the morning, the child being unconscious the whole time. At this hour the remedies employed began to produce a good effect, the convulsions ceased, and consciousness returned. Feverish and other

symptoms ensued, but health was regained after a few days. Now this attack, which was most severe, and gave great alarm to the parents, and very reasonably so, was brought about entirely by the child being allowed to eat at its dinner meal (seven hours before the fits occurred) immoderately,—and much too fast, the food being bolted, not masticated, as proved by what was brought up,—and from a want of due care in the selection of the food, which was boiled pork and apple pudding.

#### ANIMAL FOOD.

If a child be of a *sound constitution*, with healthy bowels, a cool skin, and clean tongue, the diet may be liberal, and, provided he is sufficiently advanced in age, animal food may be taken daily. Too low a diet would stint the growth of such a child, and induce a state of body deficient in vigour, and unfit to resist impressions unfavourable to health, and serofula and other diseases would be induced. At the same time, let the mother avoid pampering, for this would lead to evils no less formidable, though of a different character. And as long as the general health of this child is unimpaired, the body and mind active, and no evidence present to mark excess of nutriment, this diet may be continued. But if languor at any time ensue, fever become manifested, the skin hotter than natural, the tongue white and furred, and the bowels irregular, then, though these symptoms should be only in slight degree, and unattended with any specific derangement amounting to what is considered disease, not only should the parent lower the diet, and for a time withdraw the animal part, but the medical adviser should be consulted, that measures may be taken to correct the state of repletion which has been suffered to arise. For some time after its removal, care should also be taken to keep the diet under that which occasioned the constitutional disturbance.

But if the child be of a *delicate and weakly constitution*, it will not bear so generous a diet as the foregoing. During the three or four earliest years, it should be restricted chiefly to a mild farinaceous diet, with a small allowance only of meat on alternate days. The constant endeavour of the parent now should be to seek to increase the digestive power and bodily vigour of her child by frequent exercise in the open air, and by attention to those general points of management detailed in the next chapter. This accomplished, a greater proportion of animal food may be given, and, in fact, will become necessary for the growth of the system, while at the same time there will be greater power of assimilation and digestion. A great error in the dietetic management of such

children is frequently committed by parents. They suppose that because their child is weakly and delicate, that the more animal food it takes the more it will be strengthened, and they therefore give animal food too early, and in too great quantity. This is to add to its debility. The system, as a consequence, becomes excited, nutrition is impeded, and disease produced, ultimately manifesting itself in scrofula, disease in the abdomen, head, or chest. The first seeds of consumption are often sown in this way. A child so indulged will eat heartily enough, but he remains thin notwithstanding. After a time he will have frequent fever, will appear heated and flushed towards evening, when he will drink greedily, and more than is usual in children of the same age; there will be a deranged condition of the bowels, and headache,—the child will soon become peevish, irritable, and impatient; he will entirely lose the good humour so natural to childhood, and that there is something wrong will be evident enough, the parent, however, little suspecting the real cause and occasion of all the evil. In such a child, too, it will be found that the ordinary diseases of infancy, scarlet fever, measles, small pox, &c., will be attended with an unusual degree of constitutional disturbance; that it will not bear such active treatment as other children, or so quickly rally from the illness. “Strength is to be obtained, not from the kind of food which contains most nourishment in itself, but from that which is best adapted to the condition of the digestive organs at the time when it is taken.”

Of animal food mutton and beef are the best fitted for the nursery; no meat is so digestible as tender mutton; beef, although equally nutritious, from its texture being firmer, is not quite so easily digested. Lamb may occasionally be taken, veal never; it is difficult of digestion, and less nutritive than the older meats. Pork ought equally to be avoided; also all salted meats, the fibre of which becomes so changed by this process, as to render them very difficult of digestion by a young stomach. Fish may occasionally be given; it is, however, much less nutritive than beef or mutton, and frequently made very indigestible by the addition of either melted butter, lobster, shrimp, or egg sauce, which should therefore never be given to children.

#### VEGETABLES.

The *potato*, when in good condition, and well boiled, so as to become mealy, forms a nutritious and easily digested article of food for children; and a few weeks, therefore, after solid animal food is commenced, a small portion of this vegetable may with

advantage be taken with it. It is hardly necessary to observe that the hard and waxy, as well as the new potato, are equally indigestible and injurious. This vegetable ought to be the one in common use, still there are others for which it may occasionally be exchanged.

The *carrot* is very nutritive, but must be thoroughly boiled, or it is indigestible, and it should only be eaten when young. The *turnip*, although not very nutritive, is in general easily digested, and when well boiled and the watery part separated by pressure, does not produce flatulence as some suppose. *Asparagus* is a nutritive and light kind of aliment; the only objection to its use is the melted butter, for which pure gravy had always better be substituted. Old asparagus, however, is very unwholesome. *Cauliflower* and *brocoli* are not very nutritive, but may occasionally be given. *Greens* require great care in the cooking; and if given, they should always be in small quantity, and never to a dyspeptic child, in whom they will be apt to disagree, by producing acidity, flatulence, and their consequences. It should be remembered that vegetables too little boiled always prove injurious to children: they are indigestible.

*Rice* will at all times be a grateful addition to meat, and is particularly useful where potatoes and vegetables are found to disagree with the stomach. It must always be completely cooked; each grain thoroughly swelled and yet unbroken.

*Peas-meal* contains a large proportion of vegetable casein, and is therefore a very nutritious article of food. It is not easily digested, however, but may be used with advantage to thicken and flavour soups and broths.

#### SUGAR AND SALT.

*Sugar* is a necessary condiment for the food of children; it is wholesome and nutritious. It must, however, be given at all times in moderation, and, to a child at all dyspeptic, with caution, as it is apt to give rise to flatulence and acidity. "The fondness of children for saccharine substances," says Dr. Pereira, "may be regarded as a natural instinct; since nature, by placing it in milk, evidently intended it to form a part of their nourishment during the first period of their existence. Instead, therefore, of repressing this appetite for sugar, it ought rather to be gratified in moderation." Its free use does not injure the teeth as is generally imagined. "During the sugar season," observes Dr. Dunglison, "the negroes of the West India islands drink copiously of the juice of the cane, yet their teeth are not injured; on the contrary,

they have been praised by writers for their beauty and soundness; and the rounded form of the body, whilst they can indulge in the juice, sufficiently testifies to the nutrient qualities of the saccharine beverage." Sweetmeats, on the other hand, are most indigestible and seriously injurious; but this is referred to in the following section.

*Salt* is a necessary article of food, being essential to the preservation of health, and the maintenance of life. Nature has therefore an appetite for it. One of the ill effects of an unsalted diet is the generation of worms. In Ireland, where from the bad quality of the food the lower classes are generally infested with these insects, a draught of salt and water is a popular and efficacious anthelmintic. Lord Sommerville, in his address to the Board of Agriculture, gave an interesting account of the effects of a punishment which formerly existed in Holland. "The ancient laws of the country ordained men to be kept on bread alone, *unmixed with salt*, as the severest punishment that could be inflicted upon them in their moist climate. The effect was horrible; these wretched criminals are said to have been devoured by worms engendered in their own stomachs." The wholesomeness and digestibility of our bread are undoubtedly much promoted by the addition of the salt which it so universally receives. A pound of salt is generally added to each bushel of flour. Hence it may be presumed that every adult consumes two ounces of salt per week, or six pounds and a half per annum, in bread only. It has been calculated, indeed, that the average annual consumption of salt by an adult amounts to 16 lbs.; equal to about five ounces per week. In early infancy salt in small quantity may always be added with great advantage to the farinaceous food.

#### FRESH AND DRIED FRUITS AND SWEETMEATS.

*Fresh fruits*, as a general rule, are injurious to a *delicate* child, with the exception of the orange. This fruit, when quite ripe, is rarely inadmissible; the skin and seeds, however, must be scrupulously rejected. The juice, too, forms a refreshing and grateful beverage, and in some of the complaints of childhood is useful in allaying thirst and diminishing preternatural heat. When unripe, it is almost sure to cause griping, and should not be allowed even with the addition of sugar. A *healthy child*, whose digestive organs are vigorous, and in whom there is no liability to bowel derangement, may be permitted occasionally to partake of most fresh fruits, but it must be in moderate quantity. Apples and pears, when perfectly ripe, and well masticated, are not unwhole-



some. It is somewhat hazardous, however, to allow these fruits in the raw state to a very young child, lest they should not be properly masticated; and it need scarcely be added, that the unripe apples which children are so frequently allowed to take are not only indigestible, but sometimes seriously hurtful. The apple when roasted forms a pleasant repast, and where there is a costive habit is useful as a laxative. Of the stone fruits, the ripe peach, the aprieot, and nectarine are the most wholesome, but cherries ought never to be allowed; they do not agree with children, and besides this, the stones are not unfrequently swallowed, when they sometimes produce very alarming and occasionally fatal results. The grape is delicious, as well as cooling and antiseptic, but the skin and seeds must be carefully rejected. Of the small-seeded fruits, the ripe strawberry and raspberry are most wholesome; the latter, when taken freely, promotes the action of the bowels. The gooseberry is less wholesome, on account of the indigestibility of the skin, which is too frequently swallowed. The fresh currant I object to for young children on account of the seeds, which I have known to be retained in the bowels for days and even weeks, irritating the lining membrane, and thus exciting and keeping up a diarrhœa which immediately got well upon their expulsion.

*Dried fruits and sweetmeats* a young child should never be permitted to take; they are a constant source of disorder. And yet no indulgence is so common in some families as this; and because it is not generally attended with an immediate bad effect, it is never thought to be injurious. The practice of having young children down after the parents' late dinner, and giving them the dried and preserved fruits and other confectionary which may be on the table, is very productive of indigestion and bowel complaints. Again and again have I traced to this habit illness of a serious and protracted character. Dr. Eberle very justly says:—"The conduct of parents in relation to this subject is often extremely irrational and pernicious in its consequences. They would not themselves venture on the frequent and free use of confectionaries of this kind; and yet will indulge their children with scarcely any restraint in the use of these pernicious luxuries. The sicklier and weaker a child is, the more apt in general is it to be allowed these destructive gratifications. The pale, feeble, and sickly child, whose stomach is hardly able to digest the most simple and appropriate aliment, is sought to be appeased and delighted by the luscious and scarcely digestible articles of the confectioner. Indigestion, intestinal irritation, terminating often in ulceration and incurable diarrhœa, are the frequent consequences of such conduct; and at best, such indulgences must inevitably



prolong the feeble and sickly condition of the child, and not unfrequently eventuate in permanent constitutional infirmity." My own observation and experience confirms most fully the truth of this statement. In families where there is much dinner company, as a general rule, there is always more disorder of the digestive organs of the children than where this is not the case.

The dried grape or raisin should be given to children with caution, and, indeed, they are better altogether without them. If eaten freely, they are apt to disorder the digestive organs and cause flatulence; but more than this, the skins, which are not digestible even by the stomach of the adult, are liable to remain in the bowels, and cause very serious illness. Dr. Eberle speaks of three instances occurring to him, in which convulsions and speedy death were unequivocally the consequence of overcharging the stomach with this fruit; and he relates another case of the child of a medical friend, of a most alarming character, produced by the same cause. "The infant appeared to be well when put to bed. On attending it about midnight, it was found cold, pulseless, with a deathlike expression of the countenance, and apparently dying. In a short time spontaneous vomiting came on, by which a large quantity of raisins was thrown from the stomach, after which all the alarming symptoms speedily disappeared. The raisins had been given to the child by a servant of the family, without the knowledge of its parents."

#### WATER, WINE, BEER, AND SPIRITS.

*Water* should be the only beverage throughout childhood—toast-and-water, if the child prefer it, which is rendered slightly more nutritive than the more simple fluid. The water employed in its preparation, however, must be at a boiling temperature, and it ought to be drunk as soon as it has sufficiently cooled; for by being kept it acquires a mawkish and unpleasant flavour.

The practice of giving *wine*, *beer*, or, indeed, *any stimulant*, to a healthy child is highly reprehensible; it ought never to be given except medicinally. The circulation in infancy and childhood is not only more rapid than in the adult, but easily excited to greater vehemence of action; the nervous system, too, is so susceptible, that the slightest causes of irritation produce strong and powerful impressions: the result in either case is diseased action in the frame, productive of fever, convulsions, or some functional derangement. An experiment made by Dr. Hunter upon two of his children, illustrates in a striking manner, the pernicious effects of even a small portion of intoxicating liquors

at this tender age. To one of the children he gave every day after dinner a full glass of sherry : the child was five years of age, and unaccustomed to the use of wine. To the other child, of nearly the same age, and equally unused to wine, he gave an orange. In the course of a week, a very marked difference was perceptible in the pulse, urine, and evacuations from the bowels of the two children. The pulse of the first was raised, the urine high-coloured, and the evacuations destitute of their usual quantity of bile. In the other child, no change whatever was produced. He then reversed the experiment, giving to the first the orange, and to the second the wine, and the results corresponded: the child who had the orange continued well, and the system of the other got straightway into disorder, as in the first experiment.

Marellin relates an instance of seven children in a family whose bowels became infested with worms, from the use of stimulants. They were cured by substituting water for the pernicious beverage.

In London, spirits, particularly gin, are given to infants and children to a frightful extent. I once saw an old Irish woman give diluted spirits to an infant just born. A short time since one of these dram-drinking children, about eight years of age was brought into one of our hospitals. The attendants, from its emaciated appearance, considered the child was dying from mere starvation ; which was true enough in a certain sense. Food was accordingly offered and pressed upon it, but the boy would not even put it to his lips. The next day it was discovered that the mother brought the child nearly a pint of gin, every drop of which before night he had consumed ; a quantity which must have destroyed life, if dram-drinking had not been the habit of the boy.

It is easy to discover when children have been fed upon spirits : they are always emaciated, have a lean, yellow, haggard look ; the eyes sunk, the lips pale, and the teeth discoloured, the cadaverous aspect of the countenance being most fearful. They are continually suffering from bowel complaints and convulsive disorders, which, under these circumstances, terminate invariably in an early death.

There is a circumstance connected with the dieting of children with which parents ought to be acquainted ; certain articles of food most wholesome in themselves, and taken with advantage by others, disagree with an individual child. We cannot conceive why, but presume it depends upon a hidden peculiarity of constitution, which we call idiosyncrasy, and which generally remains through life. Eggs, milk, sugar, cheese, mutton, and other kinds

of food, will thus have an almost poisonous effect, even when taken in the smallest quantity, and however disguised by the most ingenious cookery. Dr. Prout mentions the case of an individual who could not eat mutton in any form. The peculiarity was supposed to be owing to caprice, and the mutton was repeatedly disguised, and given unknown to the individual; but uniformly with the same result of producing vomiting and diarrhoea. And from the severity of the effects, which were in fact those of a virulent poison, there can be little doubt, that if the use of mutton had been persisted in, it would soon have destroyed the life of the individual. But whilst we admit this rare peculiarity, we must be careful not to indulge the dainty dislikes of a child to substances which, when eaten, produce no ill effects. For the mind's sake, as well as the body, such a disposition cannot be too early and vigorously opposed.

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## GENERAL MANAGEMENT OF INFANTS UP TO THE SECOND YEAR,

AND OF CHILDREN UP TO THE EIGHTH.

### OF CHILDREN'S APARTMENTS AND SERVANTS.

A large portion of the early years of children being spent in the nursery, and under the immediate care of dependants, the apartments they inhabit, and the persons who have the charge of them, ought to be of no small moment to parents, for the health and future welfare of their children will greatly depend on these two points.

*Apartments.*—The proper ventilation of the apartments of children has not hitherto received that share of attention which its serious influence upon health deserves. Provision is rarely made for a regular supply of fresh, or removal of vitiated air, beyond what is afforded by windows, doors, and open chimneys. The fact is that the public generally are not yet alive to the vast evils consequent upon breathing impure air. If, however, any one wants to be convinced, and to see them in their most unmitigated form, it is only necessary to visit the dwellings of the poor in a crowded city; the atmosphere they will have to breathe, and the appearance of the inmates, will amply suffice to convince the most skeptical. In Mr. Farr's calculations, founded on the returns made to the Registrar General, it is stated in the third Annual

Report, that in cities, as contrasted with rural districts, the deaths from consumption are increased 24 per cent.; those from typhus fever 55 per cent.; those from child-birth 59 per cent.; and so of several disorders. The diseases chiefly incidental to childhood are twice as fatal in the town districts as they are in the country. The mean duration of life in the two classes of districts differs nearly 17 years; being in the proportion of 55 in the country to 38 years in the towns. These differences can only be explained by attributing them to the weakening influence of impure air, and the want of sufficient exercise; and there is one circumstance which shows that impure air is the more noxious agent of the two, namely, the great comparative mortality in towns of children under two years of age, even although they get as much exercise as their time of life would allow of anywhere. Many authorities might be appealed to in confirmation of this conclusion. I will only cite one: Sir James Clark regards "the respiration of a deteriorated atmosphere as one of the most powerful causes of tuberculous cachexia," (viz., the constitutional affection which precedes the appearance of consumption.) He says, "If an infant born in perfect health, and of the healthiest parents, be kept in close rooms, in which free ventilation and cleanliness are neglected, a few months will often suffice to induce tuberculous cachexia." "There can be no doubt," he adds, "that the habitual respiration of the air of ill-ventilated and gloomy alleys in large towns is a powerful means of augmenting the hereditary disposition to scrofula, and even of inducing such a disposition *de novo*. Children reared in the work-houses of this country, and in similar establishments abroad, almost all become scrofulous, and this more, I believe, from the confined impure air in which they live, and the want of active exercise, than from defective nourishment." A striking instance of the ill effects of deficient ventilation in schools strongly confirmatory of this view is mentioned in the second volume of the Poor Law Reports. The school referred to consisted of 600 pupils, amongst whom scrofula broke out extensively, and great mortality occurred, which was ascribed to bad and insufficient food. The case was investigated; the food was proved to be most abundant and good; and defective ventilation and consequent atmospheric impurity was assigned as the cause. Ventilation was applied, the scrofula soon after disappeared, and 1100 children are now maintained in good health where the 600, before ventilation, were scrofulous and sickly.

Enough has been said, I think, to prove the extreme importance of thorough ventilation in the apartments of the young, and to induce the reader to adopt the principle, where at present it is in

any degree neglected. For it may be regarded as a well-ascertained fact, that where systematic ventilation does not exist, it is almost impossible to keep an apartment shut up for any length of time, without a condition of atmosphere being produced that must be injurious. How often, where rooms are ill-ventilated, must a mother on entering her nursery in the course of the day, but more particularly the bedroom of her children in the early morning, be sensible of the impurity of the atmosphere, while the occupants are altogether unconscious of it. Comparatively fresh at the commencement of the day or night, the air deteriorates so slowly and equally that, unless it is contrasted with the external atmosphere, its impure state is not perceived. Now, the result of breathing this day after day, and night after night, however slightly it may be vitiated, is inevitably deteriorative of health, and although its injurious influence be not so immediate or serious as in the aggravated case of the poor child, *it is* slowly going on, and is *like in kind*, for scrofula (the sure result of a fixed law) in one or other of its forms, or delicate health, will manifest itself. The lassitude and weariness of children after a night's repose, when they ought to be refreshed and sprightly, is often attributed to indisposition, when it frequently arises simply from breathing through the night the atmosphere of a close bedroom.

To explain the manner in which the atmosphere becomes deteriorated by respiration seems desirable, and I cannot do better than quote Dr. Arnott's words: "Ventilation is the changing anywhere, air which has been rendered impure. The chief cause of impurity is the respiration of persons in the place. In respiration or breathing, a man draws into his chest at one time about 20 cubic inches of air, and of that air a fifth part is oxygen, of which again there is converted into carbonic acid nearly one-half. The carbonic acid, if afterwards inhaled, would be obnoxious to the individual. About 15 inspirations are made in the minute, vitiating therefore 300 cubic inches, or nearly one-sixth of a cubic foot of atmospheric air, but which, mixing as it escapes with several times as much, renders unfit for respiration at least two cubic feet under common circumstances. The removal of this impure air, and the supply in its stead of fresh air, is perfectly accomplished by an uninterrupted natural agency. The air which issues from the chest being heated to near the temperature of the body, or 98°, and therefore dilated, is specifically lighter than the surrounding air at any ordinary temperature, and therefore ascends in the atmosphere, to be diffused there, as oil set free under water rises in it to spread above: in both cases, a



heavier fluid, in fact, pushing up and taking the place of a lighter. This beautiful provision of nature, without trouble to the party, or even his being aware of it, is relieving him at every instant from the presence of a deadly, though invisible poison, and replacing it with pure, vital sustenance; and the process continues while he sleeps as while he wakes, and is as perfect for the unconscious babe, or even brute creature, as for the wisest philosopher. The process may be called natural ventilation, and in the open atmosphere, while the wind blows, and air is as uninterruptedly passing the person, as the water of a mountain stream is passing its finny inhabitants, the process is perfect. When men, however, construct apartments which shut up or confine air, the action is disturbed. But even then, some degree of the same change always takes place by the escape through the crevices and joinings about windows, doors, &c., of a portion of the warm air, to be replaced by fresh air entering below. And it is this natural ventilation of rooms, which, by effecting the purpose to a certain degree, has prevented the mass of mankind from discovering the want of any other. Such accidental ventilation, however, is very irregular and imperfect.”\* It will be observed that the breath of the inmates of the apartment does not tend towards the chimney, but directly to the ceiling, and to escape must again descend to come below the level of the mantel-piece ere it reach the chimney, and thus the same air may be breathed again and again.†

Provided there be a proper draught up the chimney Dr. Arnott’s valve‡ secures the most perfect ventilation, and must be consider-

\* Dr. Arnott on Ventilating and Warming.

† It is known that a canary bird, suspended at the top of a curtained bedstead in which people have slept, will generally, owing to the impurity of the air, be found dead in the morning.

‡ “The ventilating valve is a contrivance placed in an opening made from the room into the chimney flue, near the ceiling, by which all the noxious air above referred to, is allowed at once, in obedience to the chimney draught, to pass away, but through which no air or smoke can return. The valve is in principle a small weigh-beam or steel-yard, carrying on one arm a metallic flap to close the opening, and on the other a weight to balance the flap. The weight may be screwed on its arm to such a distance from the axis, or centre of motion, that it shall exactly counterpoise the flap, but when in use it is left a little farther off, so as just to preponderate, and to lift the flap very softly to the closing position. Although the valve, therefore, be heavy and durable, a breath of air suffices to move it; which, if from the room, opens it, and if from the chimney, closes it; and when no such force interferes, it settles in its closed position.

“It is to be observed, that if the opening or throat of the chimney flue at the fire-place be so wide, that more air can easily enter there than can escape at the chimney pot above, the chimney will not draw air in also at the ventilating valve; it is essential, therefore, that the register



ed one of the most valuable of that disinterested philosopher's contributions to human welfare and comfort. But owing to the unscientific construction of most fire-places and chimney flues, this contrivance is often rendered futile by the downward draught in certain states of the atmosphere. There is, however, a chimney-pot exhibited at Edwards', Poland Street, which (it is said) under all circumstances secures this upward draught, and besides preventing the possibility of the chimney smoking, furnishes to Dr. Arnott's ventilating valve the conditions under which it perfectly realizes the expectations of its inventor.

For the admission of fresh air into the apartment, if the crevices usually and unavoidably left around the doors and windows of rooms, do not admit enough to feed the fire and to ventilate sufficiently, and they seldom do, it will be well either to widen the chink above the door, or in some cases to introduce a plate of zinc finely perforated (220 holes to an inch) into one of the window frames,—the size of which plate must vary, according to the size and construction of the room. These fine orifices prevent the air coming in with a rush, which would occasion discomfort, and tend to diffuse the air equally and gently through the apartment. There are other modes proposed, which under certain circumstances may be more desirable. But whatever plan is adopted it is imperatively necessary to secure a pure external atmosphere by effective drainage, cleansing, and prevention of nuisances, for without such measures no system of ventilation can be successful, and with it one-half of the remedy may be said to be already secured.

In addition to these means, the windows of the nursery should be thrown wide open before the children come into it in the morning, and those of the bed-room after they have left it; and, of course, in summer whether both may be frequently left open during the day, when judiciously managed, with great advantage. No cook-

door, which is part of ordinary good stoves, be so far closed, after the fire is lighted, as to allow only the smoky air to enter, and not also, as is common, much of the pure air of the room escaping to waste. Where such a door does not exist, it may be obtained for a few shillings. It is farther essential, that the chimney-pot above be of sufficient size, and that no known cause of unsteady draught be allowed to remain. Usually the crevices unavoidably left around the doors and windows of rooms, admit air enough to feed the fire and to ventilate sufficiently, but occasionally, it is well to widen the chink above or below the door. In summer, when there is no fire, the bottom of the chimney should be closed by the register door, or by the common chimney board."—*Dr. Arnott on Ventilation and Warming.*

This valve, and full particulars, may be obtained at Edwards', 20 Poland Street, Oxford Street.

ing, or washing of linen, nothing, in fact, that would pollute the atmosphere, must be permitted in the nursery. Its temperature must be carefully regulated, and never allowed to rise above  $65^{\circ}$ . Heated rooms make children very susceptible of disease, particularly during the period of teething; and such as are accustomed to immoderately warmed rooms will always, when taken into the cold external air, be much more liable to suffer than others, and during cold and humid weather will seldom be free from coughs and colds. The best mode of warming is a good coal fire. In the winter months, in the case of young children, there should also be a fire in the bed-room, so as to secure a temperature of  $60^{\circ}$ . Many an attack of inflammation of the lungs has arisen from a delicate child being undressed and put to bed at this period of the year in a room where this precaution has been disregarded.

If possible, the nursery should have a southerly or westerly aspect, command a pleasant prospect without, and be light and cheerful within. The light of the sun has a powerful influence upon the growth and healthy development of the body; and if children are immured in cheerless rooms, looking into dark shrubberies, or on the back yards and chimneys of a town, their health must inevitably suffer. The influence of light on the vegetable kingdom is known to every one who has observed the bleached appearance of a plant growing in the dark, or corn growing under the shade of a tree, which is always paler and later in ripening than that growing in an open part of the field. Some ingenious experiments were made by Dr. Edwards, showing the influence of light upon the development of animals, in which it was found that those which naturally change their form, as tadpoles, were prevented doing so by its withdrawal. By analogy we are warranted in inferring that light must materially influence development and health in man; and it is positively found that children deprived of its wholesome and gentle stimulus grow up pale, sickly, and deformed, of which numerous examples may be seen in the dark courts and cellars of all great cities.

Then, again, a dull and confined prospect is a source of gloom to the naturally cheerful and active mind of a child; it should look out upon that which would gladden and refresh it. For the same reason the walls of its nursery should be surrounded with pleasant and instructive pictures (easily attainable in the present day); all which would tend constantly, although imperceptibly, to produce a beneficial and happy influence upon health and character. The fire should be guarded by a high and firmly fixed fender; the lower half of the windows with iron bars,—a precaution

which has saved many a life. The floor also should be well carpeted, which best prevents those serious effects which sometimes follow severe falls in early childhood. Never have any unnecessary furniture in this apartment, that there may be ample space for the children to exercise and amuse themselves in. Leave as few things as possible within their reach, which they are not to touch; and never allow painted toys to very young children; they carry them to their mouths (particularly if teething), and sucking off the paint, there is great danger of their health suffering from the lead which is thus swallowed.

*Nurse-maid.*—I would remind the mother that although she is the guardian of the physical and moral health of her children, she must recollect that the nurse-maid must necessarily have a considerable influence over the culture of both. The most watchful parent cannot be every moment in her nursery, but her nurse-maid lives there. Day and night she has the care of and is the companion of the little ones. She looks after their persons, food, clothing, and apartments,—their amusements, exercise, and rest,—and she must necessarily, more or less, have to do with the formation of their moral character. Not only their present health and well-doing, but their conduct and happiness in future life, will, to a great degree, be influenced by the manner in which the nurse-maid's duty is performed. There is therefore every reason for using the utmost care in the selection of the individual to whom such a trust is confided.

A nurse should be of a happy, cheerful disposition; this has a most beneficial influence on the character and health of children. The youngest child is sensibly affected by the feelings apparent in the faces of those around him. How beautifully is this circumstance illustrated in the following quotation from the diary of a titled and amiable woman of former times, which, although a fiction, the paragraph I quote is so true to nature that I cannot refrain from inserting it. Speaking of her first and infant boy, she writes:—"Yesterday it happened, as I nursed him, that, being vexed by some trifling matters that were not done as I desired, the disturbed expression of my countenance so distressed him that he uttered a complaining cry; made happy by a smile and by the more serene aspect that affection called forth, he nestled his little face again in my bosom and did soon fall asleep. It doth seem a trifling thing to note, but it teacheth the necessity of watchfulness."\* An active, cheerful, good-humoured nurse, by regular affectionate attendance, by endeavouring to prevent all

\* Diary of Lady Willoughby, p. 11.

unnecessary suffering, and by quickly comprehending the language of signs in her little charge, will *make* a child good-humoured. Yet, on the other hand, the best-humoured woman in the world, if she is stupid, is not fit to have the care of a child, for it will not be able to make her understand any thing less than vociferation. A careless, negligent, and passionate woman will not only injure the temper of the child, but its health too. If possible, avoid placing children under the charge of an individual suffering from any great natural defect—a person who squints, for instance, or who may have lost an eye,—or who is lame, or particularly ugly,—or even one who has a bad expression of countenance. Any one who stutters, or has any kind of impediment in her speech,—nay, any one whose voice is particularly harsh and loud,—or whose manners are rough and clumsy,—is not a fit person to have charge of children.

*Cleanliness* is essential in a nurse. Without thorough cleanliness the health and comfort of children must greatly suffer. Their persons, clothes, bed-clothes, and beds must ever be kept clean, pure, and sweet; and depend upon it this will never be the case, if the nurse who has the charge of them is not in herself in all respects cleanly. Never be satisfied with a nurse merely washing her face and hands upon rising in the morning, and the latter during the day as occasion may oblige her; but require a thorough ablution of the whole body, every or every other morning. This will not be thought by any means a work of supererogation, when it is remembered that one or other of the little ones is in the nurse's arms the greater part of the day, and, perhaps, during the night one has to sleep with her.

A nurse should be an early riser. She will thus betimes have her nursery well ventilated and cleaned, and ready for the children, who are generally early risers, or ought to be. In order for this to be habitually carried out, arrangements must always allow the nurse-maid to retire to rest early.

A nurse-maid should be fully impressed with the importance of promptly informing the parents of any circumstances connected with the health of the children that from time to time may demand attention. An observant nurse will often, by thus timely drawing attention to slight indisposition, prevent serious disease. And she should, on no account, conceal any injury the child may have sustained.

#### SLEEP.

*During Infancy.*—For three or four weeks after birth the infant sleeps, more or less, day and night, only waking to satisfy

the demands of hunger. At the expiration of this time, however, each interval of wakefulness grows longer, so that it sleeps less frequently, but for longer periods at a time. This disposition to repose in the early weeks of the infant's life must not be interfered with; but this period having expired, great care will be necessary to induce regularity in the hours of rest, otherwise too much will be taken in the daytime, and restless and disturbed nights will follow. The child should be brought into the habit of sleeping in the middle of the day, say from eleven to one o'clock, and again for half an hour or an hour about three o'clock, not later, or it will inevitably cause a bad night. He should not now be put to sleep immediately after a meal, as the process of digestion would cause the sleep to be uneasy, and therefore unrefreshing. The amount of sleep required will necessarily differ somewhat in different children, but an observant parent will soon determine for herself what is required, and the regulations laid down above will be found generally applicable. The chamber should always be darkened and kept as free from noise as possible.

During the lying-in month the infant should sleep with its parent; the low temperature of its body, and its small power of generating heat, render this necessary. If it should happen, however, that the child has disturbed and restless nights, it must immediately be removed to the bed and care of another female, to be brought to its mother at an early hour in the morning, for the purpose of being nursed. This is necessary for the preservation of the mother's health, which, through sleepless nights, would of course be soon deranged, and the infant would also suffer from the influence this would have upon the milk.

When a month or six weeks has elapsed, the child, if healthy, may sleep alone in a cradle or cot, care being taken that it has a sufficiency of clothing,—that the room in which it is placed is sufficiently warm, certainly not under  $60^{\circ}$ ,—and the position of the cot itself is not such as to be exposed to currents of cold air. It is essentially necessary to attend to these points, since the faculty of producing heat, and consequently the power of maintaining the temperature, is less during sleep than at any other time, and therefore exposure to cold is especially injurious. It is frequently the case that inflammation of some internal organ will occur under such circumstances, without the true source of the disease ever being suspected. Here, however, the error must be guarded against, of covering up the infant in its cot with too much clothing—throwing over its face the muslin handkerchief—and, last of all, drawing the drapery of the bed closely together. The object is to keep the infant sufficiently warm with pure air;



it therefore ought to have free access to its mouth, and the atmosphere of the whole room should be kept sufficiently warm to allow the child to breathe it freely : in winter, therefore, there must always be a fire both in the bed-room and nursery, and the light must be excluded by closing the window-curtains or shutters.

The child, up to two years, at least, should sleep upon a feather bed, for the reasons referred to above. The pillow, however, after the sixth month, should be made of horse-hair; for at this time teething commences, and it is highly important that the head should be kept cool. Great care must be taken to keep the bed and bed-clothes of the infant perfectly sweet and clean. They should be frequently taken out and exposed to the air. A very excellent means to prevent their being soiled is the use of Macintosh sheeting.

*During childhood.*—From the second year and up to the third or fourth, the child should be permitted to sleep for an hour or so before its dinner. After this time it may gradually be discontinued; but it must be recollected, that during the whole period of childhood more sleep is required than in adult age. The child, therefore, should be put to rest every evening between seven and eight; and if it be in health, it will sleep soundly until the following morning. No definite rule, however, can be laid down in reference to the number of hours of sleep to be allowed; for one will require more or less than another. The amount of sleep necessary to preserve health varies according to the state of the body, and the habits of the individual. As already observed, infants pass much the greater portion of their time in sleep. Children sleep twelve or fourteen hours. The schoolboy generally ten. In youth a third part of the twenty-four hours is spent in sleep. Whilst in advanced age, many do not spend more than four, five, or six hours in sleep. Regularity as to the time of going to rest is the chief point to attend to; permit nothing to interfere with this, and then only let the child sleep without disturbance, until it awakes of its own accord on the following morning, and it will have had sufficient rest.

It is a cruel thing for a mother to sacrifice her child's health that she may indulge her own vanity; and yet how often is this done in reference to sleep. An evening party is to assemble, and the little child is kept up for hours beyond its stated time for retiring to rest, that it may be exhibited, fondled, and admired. Its usual portion of sleep is thus abridged, and from the previous excitement, what little he does obtain is broken and unrefreshing, and he rises on the morrow wearied and exhausted.



Once awake, he should not be permitted to lie longer in bed, but he should be encouraged to rise immediately. This is the way to bring about the habit of early rising, which prevents many serious evils to which parents are not sufficiently alive, promotes both mental and corporeal health, and of all habits is said to be the most conducive to longevity.

A child should never be suddenly aroused from sleep; it excites the brain, quickens the action of the heart, and, if often repeated, serious consequences would result. The change of sleeping to waking should always be gradual.

The bed on which the child now sleeps should be a mattress: at this age a feather bed is always injurious to children; for the body, sinking deep into the bed, is completely buried in feathers, and the unnatural degree of warmth thus produced relaxes and weakens the system, particularly the skin, and renders the child unusually susceptible to the impressions of cold. Instead of the bed being made up in the morning as soon as vacated (a very common practice), and while still saturated with the nocturnal exhalations from the body, the night and bed-clothes should be thrown over the backs of chairs, the mattress shaken well up, and the window thrown open for several hours, so that the apartment shall be thoroughly ventilated. Never allow a child to sleep with persons in bad health, or who are far advanced in life; if possible he should sleep alone. Those who possess the means should avoid placing several children in the same bed-room.

#### BATHING AND CLEANLINESS.

*During infancy.*—Too much attention cannot be paid to cleanliness: it is essential to the infant's health. There is constantly exhaling from the innumerable pores of the skin a large amount of fluid and solid matter designated in common terms the perspiration. The fluid part of this passes off, and mixes with the atmosphere, but a great portion is left adhering to the skin. The latter, if not removed, after a time so accumulates as to obstruct the pores, and necessarily impedes any further exhalation. The result is disordered health, or perhaps an obstinate and troublesome eruption on the skin itself. Persons generally have no idea of the value and importance of the functions of the perspiratory system, and its influence on the health and comfort of the individual. This subject is presented in a very interesting and striking manner in the following observations of Mr. Erasmus Wilson. "I counted the perspiratory pores in the palm of the hand, and found 3528 in a square inch. Now, each of these pores being the aperture of

a little tube about a quarter of an inch long, it follows that in a square inch of skin on the palm of the hand there exists a length of tube equal to 882 inches, or  $73\frac{1}{2}$  feet. Surely such an amount of *drainage* as 73 feet in every square inch of skin, assuming this to be the average of the whole body, is something wonderful, and the thought naturally intrudes itself,—what if this *drainage* was obstructed?"\* "The number of square inches of surface in a man of ordinary height and bulk is 2500; the number of pores, therefore, is 700,000, and the number of inches of perspiratory tube 1,750,000, that is 145,833 feet, or 48,600 yards, or nearly 28 miles." From this explanation the necessity and value of cleanliness to the health must be self-evident. Besides these important considerations, Dr. Eberle very justly observes: "The agreeable feeling which entire cleanliness is calculated to produce, as well as the excellent moral influence which it is capable of exerting on the mind, are in themselves of sufficient moment to claim for it the most solicitous attention. Children who are early accustomed to the comfortable and healthful impressions of washing and bathing, will rarely in after life neglect the observance of personal cleanliness; and those, on the contrary, who are neglected in this respect during childhood, will seldom manifest a proper regard for this physical virtue in the subsequent stages of their lives."

The principal points to which especial attention must be paid by the parent are the following:—

*Temperature of the Water.*—In the early weeks of the infant's life it should, as soon as taken from its bed in the morning, be washed in warm water from  $96^{\circ}$  to  $98^{\circ}$ , and be put into a bath of the same temperature for a few minutes every evening before it is put to rest. To bathe a delicate infant of a few days or even weeks old in colder water, with a view to harden the constitution (as it is called), is the most effectual way to undermine its health and entail future disease. By degrees, however, the water with which it is sponged in the morning should be made tepid, the evening bath being continued warm enough to be grateful to the feelings. A few months having passed by, the temperature of the water may be gradually lowered until cold is employed, with which it may be either sponged, or even plunged into it, every morning during *summer*. If plunged into cold water, however, it must be kept in but a minute; for, at this period especially, the impression of cold

\* Perhaps the importance of attending to the skin will receive additional weight by my stating that the amount of the *drainage* which daily passes from its pores approximates very nearly to that which flows from the kidneys.

continued for any considerable time depresses the vital energies, and prevents that healthy glow on the surface which usually follows the momentary and brief action of cold, and upon which its usefulness depends. With some children, indeed, there is such extreme delicacy and deficient reaction as to render the cold bath hazardous; no warm glow over the surface takes place when its use inevitably does harm; its effects, therefore, must be carefully watched.

*Drying the skin.*—The surface of the skin should always be carefully and thoroughly rubbed dry with flannel,—indeed, more than dry, for the skin should be warmed and stimulated by the assiduous gentle friction made use of. For this process of washing and drying must not be done languidly, but briskly and expeditiously; and will then be found to be one of the most effectual means of strengthening the infant. It is especially necessary carefully to dry the arm-pits, groins, and nates; and, if the child is very fat, it will be well to dust over these parts with hair-powder or starch contained in a muslin bag; this prevents excoriations and sores, which are frequently very troublesome. Soap is only required to those parts of the body which are exposed to the reception of dirt.

I cannot refrain from quoting a passage here, which I recommend to the consideration of every parent, as no less philosophical than practically true. “During this daily process of washing, which should not be done languidly, but briskly and expeditiously, the mind of the little infant should be amused and excited. In this manner, dressing, instead of being dreaded as a period of daily suffering, instead of being painful, and one continued fit of crying, will become a recreation and amusement. In this, treat your infant, even your little infant, as a sensitive and intelligent creature. Let everything which *must* be done be made not a source of pain, but of pleasure, and it will then become a source of health, and that both of body and mind; a source of exercise to the one, and of early discipline to the other. Even at this tender age the little creature may be taught to be patient, and even gay, under suffering. Let it be remembered that every act of the nurse towards the little infant is productive of good or evil upon its character as well as health. Even the act of washing and clothing may be made to discipline and improve the temper, or to try and impair it, and may, therefore, be very influential on its happiness in future life. For thus it may be taught to endure affliction with patience, and even cheerfulness, instead of fretfulness and repining. And every infliction upon the temper is also an infliction upon the body and health of the little child. The

parent and the nurse should, therefore, endeavour to throw her own mind into her duties towards her offspring. And in her intention of controlling her infant's temper, let her not forget that the first step is to control her own. How often have I observed an unhappy mother the parent of unhappy children!''\*

*Napkins.*—The frequency of the discharges from the bowels and bladder requires a frequent change of napkins. A nurse cannot be too careful of this duty from the first, so that she may be enabled to discover the periods when these discharges are about to take place, that she may not only anticipate them, but teach the child at a very early age to give intelligent warning of its necessities. Thus a habit of regularity with regard to these functions will be established, which will continue through life, and tend greatly to the promotion of health. As the child grows older the system of cleanliness must in no particular be relaxed; the hair must be regularly brushed and combed, and the ears, the eyes, the nose, and the openings of the passages from the interior of the body, as well as the surface of the skin generally, must be kept perfectly clean. The careful adoption of these means will be found the best preservative against those eruptive disorders which are so frequent and troublesome during the period of infancy.

*During childhood.*—When the second period, or that of childhood, arrives, bathing is but too frequently left off; the hands and face of the child are kept clean, and with this the nurse is satisfied; the daily ablution of the *whole* body, however, is still necessary, not only for the preservation of cleanliness, but because it promotes in a high degree the health of the child.

*Plan to be pursued with the vigorous and healthy.*—A child of a vigorous constitution and robust health, as he rises from his bed refreshed and active by his night's repose, should be put into the shower-bath, or, if this excites and alarms him too much, must be sponged from head to foot with salt water. If the weather be very cold, the water may be made slightly tepid, but if his constitution will bear it, the water should be cold throughout the year. Then the body should be speedily dried, and hastily but well rubbed with a somewhat coarse towel, and the clothes put on without any unnecessary delay. This should be done every morning of the child's life.

If such a child is at the sea-side, advantage should be taken of this circumstance, and sea-bathing should be substituted. The best time is two or three hours after breakfast; but he must not

\* Letters to a Mother, on the Watchful Care of her Infant, p. 89.

be fatigued beforehand, for if so, the cold bath cannot be used without danger. Care must be taken that he does not remain in too long, as the animal heat will be lowered below the proper degree, which would be most injurious. In boys of a feeble constitution, great mischief is often produced in this way. It is a matter also of great consequence in bathing children that they should not be terrified by the immersion, and every precaution should be taken to prevent this. The healthy and robust boy, too, should early be taught to swim, whenever this is practicable, for it is attended with the most beneficial effects; it is a most invigorating exercise, and the cold bath thus becomes doubly serviceable.

*Plan to be pursued with the delicate and strumous.*—If a child is of a delicate and strumous constitution, the cold bath during the summer is one of the best tonics that can be employed; and if living on the coast, sea-bathing will be found of singular benefit. The effects, however, of sea-bathing upon such a constitution must be particularly watched, for unless it is succeeded by a glow, a feeling of increased strength, and a keen appetite, it will do no good, and ought at once to be abandoned for the warm or tepid bath. The opinion that warm baths generally relax and weaken, is erroneous; for in this case, as in all cases when properly employed, they would give tone and vigour to the whole system: in fact, the tepid bath is to this child what the cold bath is to the more robust.

In conclusion: if the bath in any shape cannot from circumstances be obtained, then cold salt-water sponging must be used daily, and all the year round, so long as the proper reaction or glow follows its use; but when this is not the case,—and this will generally occur, if the child is delicate and the weather cold,—tepid vinegar and water, or tepid salt water, must be substituted.

#### CLOTHING.

*In infancy.*—*Infants* are very susceptible of the impressions of cold: a proper regard, therefore, to a suitable clothing of the body is essential to their enjoyment of health. Unfortunately an opinion is prevalent that the tender child has naturally a great power of generating heat and resisting cold; and from this popular error has arisen the most fatal results. This opinion has been much strengthened by the insidious manner in which cold operates on the frame, the injurious effects not being always manifest during or immediately after its application, so that but too frequently the fatal result is traced to a wrong source, or the infant sinks under the action of an unknown cause. It cannot be too



generally known that the power of generating heat in warm-blooded animals is at its minimum at birth, and increases successively to adult age—that young animals, therefore, instead of being warmer than adults, are generally a degree or two colder, and moreover part with their heat more readily. These facts show how absurd must be the folly of that system of “hardening” the constitution, which induces some parents to plunge the tender and delicate child into a cold bath at all seasons of the year, and freely expose him to the cold, cutting currents of an easterly wind, in the lightest clothing;—cruel as absurd.

The principles which ought to guide a parent in clothing her infant are as follows :—

*The material and quantity* of the clothes should be such as to preserve a sufficient proportion of warmth to the body, regulated, therefore, by the season of the year, and the delicacy or strength of the infant's constitution. In effecting this the parent must avoid the too common but frequently fatal practice of leaving bare, at all seasons of the year, the neck and upper part of the chest and arms of her little one ; such exposure in damp and cold weather being a fruitful source of croup, inflammation of the lungs, and other serious complaints. At the same time a prevalent error in the opposite extreme must be guarded against—that of enveloping the child in innumerable folds of warm clothing, and keeping it constantly confined to very hot and close rooms ; since nothing tends so much to enfeeble the constitution, to induce disease, and render the skin highly susceptible of the impressions of cold, and thus produce those very ailments which it is the chief intention to prevent. The infant's clothing should possess lightness as well as warmth, and therefore flannel and calico are the best materials to use. The skin, however, in the early months is so delicate, that a shirt of fine linen must at first be worn under the flannel ; but as the child grows older the flannel is desirable next the skin, giving by its roughness a gentle stimulus to it, and thus promoting health. When a child is at all exposed to bowel complaints, flannel is indispensable.

*They should be so made* as to put no restrictions to the free movements of all parts of the child's body—so loose and easy as to permit the insensible perspiration to have a free exit, instead of being confined and absorbed by the clothes, and held in contact with the skin till it gives rise to irritation. Full room too should be allowed for growth, which is continually and rapidly going on ; and particularly should this be the case round the throat, arm-holes, chest, and wrists, so that they may be easily let out. The construction of the dress should be so simple as to permit of being



quickly put off and on, since dressing is irksome to an infant, causing it to ery, and exeiting as much mental irritation as it is eapable of feeling. Pins should be wholly dispensed with, their use being hazardous through the earelessness of nurses, and even through the ordinary movements of the infant itself. This leads me to make one general remark, applicieable not only to the clothing, but also to other eircumstances in the economy of an infant; *the babe can itself give no explanation of the inconveniencies it suffers*. "Bearing this in mind, and remembering how continually adults are annoyed by trifles which they have the pereception to discover, and the ability to remove, it will readily be aeknowledged that nothing is too insignificant for the constant and regular attention of a mother." For example, "articles of dress contract, or otherwise lose their shape; a ruck forms, a hook bends; or a button turns and presses upon the flesh: any one of these aeidents oecasions pain, and frets the temper of an infant."

*The clothing should be changed daily*; this is eminently conducive to health. There should always too be an immediate change of wet and soiled linen, for that which is fresh and dry. Unless these directions are attended to, washing will, in a great measure, fail in its object, espeecially in insuring freedom from skin diseases. The wardrobe, therefore, must be suffieiently large to admit of this; and where pecuniary means are not abundant, the mother, in making her baby linen, should remember that quantity is more important than quality.

With regard to *caps* they should be made of thin material, with no under-cap. The head is to be kept cool, not warm. As soon as the hair begins to grow, provided it is not very cold weather, caps may with advantage be left off altogether, night as well as day.

During the first seven or eight months the child's clothes extend considerably beyond the legs and feet, and up to this period, therefore, they are completely proteeted from cold and the variations of temperature. But, from this time, when short-coating, as it is styled, is commenced, cotton or fine flannel socks should be put on in warm weather, and fine Angola stockings during cold weather. Shoes also must now be worn, made of light and pliable materials, and large enough to prevent all constraint to the feet; neither too roomy, nor too tight. Some persons object to the use of shoes, believing that they interfere with the child's learning to walk; if, however, they are large, and of pliant materials, this cannot be; whilst it must be remembered, on the other hand, that they are useful not only in proteeting the feet from cold, but from injury also, for aeidents from pins and needles

running into the feet are not at all uncommon where children are allowed to walk without them. The change to short clothing should always be avoided in cold weather.

*In childhood.*—The clothing of *childhood* should possess the same properties as that of infancy. It should afford due warmth, and yet be light, and so made as to occasion no unnatural constriction. In reference to due warmth, it may be well again to repeat, that too little clothing (that state of semi-nudity which the vanity of some parents encourages) is frequently productive of the most sudden attacks of active disease; and that children who are thus exposed, with naked breasts and thin clothing, in a climate so variable as ours, are the frequent subjects of croup and other dangerous affections of the air-passages and lungs. It has been said, and I believe with great truth, that the foundation of pulmonary consumption is often thus laid, during the first few years of life. On the other hand, do not forget that too warm clothing is also a source of disease, sometimes even of the same diseases which originate in exposure to cold, and often renders the frame more susceptible of the impressions of cold, especially of cold air taken in the lungs. Regulate the clothing, then, according to the season; resume the winter dress early, and put it aside late; for it is in spring and autumn that the vicissitudes in our climate are greatest, and congestive and inflammatory complaints most common.

With regard to *material* (as was before observed), the skin will generally long before this period bear flannel or fleecy hosiery next to it; and it is not only proper that it should be continued, but necessary. It may be put off with advantage during the night, and cotton may be substituted during the summer, the flannel being resumed early in the autumn. If, in any given case, flannel proves too irritating to the skin, fine fleecy hosiery will in general be easily endured, and will greatly conduce to the preservation of health.

It is highly important that the clothes of the boy should be so made that no restraint shall be put on the movements of the body or limbs, nor injurious pressure made on his waist or chest. All his muscles ought to have full liberty to act, as their free exercise promotes both their growth and activity, and thus insures the regularity and efficiency of the several functions to which these muscles are subservient. For this reason long drawers and socks should be worn, which avoids the necessity of garters.

The same remarks apply with equal force to the dress of the girl; and happily, during childhood at least, no distinction is made in this matter between the sexes. Not so, however, when

the girl is about to emerge from this period of life ; a system of dress is then but too frequently adopted which has the most pernicious effects upon her health, and the development of the body, —the employment of tight stays, which impede the free and full action of the respiratory organs, being only one of the many restrictions and injurious practices from which in later years she is thus doomed to suffer so severely. But the course pursued, and its terrible consequences, will be dwelt upon in the next section, on Air and Exercise.

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### AIR AND EXERCISE.

*During infancy.* —The importance of pure air in the apartments of children was pointed out in the early part of this chapter. I have here only to speak of open air exercise. Daily experience proves how invigorating and vivifying is its influence upon the system of the young. We must, however, act prudently in this matter. A delicate infant, born late in the autumn, will scarcely be able to be taken out, in a changeable climate like ours, before the succeeding spring, and provided its apartments are large, often changed, and well ventilated, he will not suffer from the confinement. No opportunity, however, should be lost, if the child be strong and healthy, of taking him into the open air at stated periods. At all seasons, however, regard must be had to the state of the weather. To a damp condition of the atmosphere the infant should never be exposed ; it is one of the most powerful exciting causes of consumptive disease : and the same caution is necessary in reference to an easterly wind, being more productive, I believe, of inflammation of the lungs, (so frequent in childhood,) than any other cause. The nurse should always have strict orders not to loiter and linger about, exposing the infant ; the source frequently of a twofold evil, a moral one to herself, and a physical one to her charge.

*Exercise*, also, like air, is essentially important to the health of the infant. Its first exercise, of course, will be in the nurse's arms : and here I would observe, that *the mode of carrying* an infant must be carefully attended to. Upon this subject I cannot do better than quote the words of Dr. Eberle ; he remarks, "The spine and its muscles seldom acquire sufficient strength and firmness before the end of the third month, to enable the child to support its body in an upright position, without inconvenience or risk of injury. Until this power is manifestly ac-

quired, the infant should not be carried or suffered to sit with its body erect, without supporting it in such a manner as to lighten the pressure made on the spine, and aid it in maintaining the upright posture of its head and trunk." He accordingly advises that "at first (a few days after birth) the infant should be taken from its cradle or bed two or three times daily, and laid on its back, upon a pillow, and carried gently about the chamber." . . . "After the third or fourth week, the child may be carried in a reclining posture on the arm of a careful nurse, in such a way as to afford entire support to the body and head. This may be done by reclining the infant upon the fore-arm, the hand embracing the upper and posterior part of the thighs, whilst its body and head are supported by resting against the breast and arm of the nurse. When held in this way, it may be gently moved from side to side, or up and down, while it is carefully carried through a well-ventilated room." This plan of passive exercise must be followed until the completion of the third month, when the child will have acquired a sufficient degree of muscular power to maintain itself in a sitting posture. In this position it may be carried about for a short time twice or thrice daily, provided the spine and head be supported by the nurse—"an aid which can seldom be prudently dispensed with before the child is six or seven months old."\*

In the mean time, when two or three months old, and it begins to sleep less during the day, the infant will greatly enjoy being occasionally placed upon a soft mattress or sofa, and allowed to roll and kick about at its pleasure. Such exercise will tend much to develop the powers of its muscular system; it will also learn to use its limbs and walk earlier than if deprived of this freedom of action.

It is a very common practice for a nurse to support a young infant upright on her knee, and violently to jolt it up and down—violently, indeed, considering the delicate structure of the infant's frame. This is done thoughtlessly, and in the belief that it is a source of enjoyment, instead manifestly of inflicting pain on the child. Gentle and cautious tossing, or rather dandling to and fro, is really agreeable to a child, and can never, therefore, be objectionable: but the rough treatment alluded to, a mother must carefully prevent. The same precaution it is necessary to observe in regard to the rocking an infant in a cradle. I believe that gentle and cautious rocking is a soothing and useful exercise to a

\* Eberle on the Diseases and Physical Education of Children, p. 45.

a child; but it is quite otherwise when rough, and long continued.

By and by, the child will make its first attempts to walk. Now, it is important that none of the many plans which have been advised to teach a child to walk should be adopted—the go-cart, leading-strings, and contrivances of this sort; their tendency is mischievous; and flatness of the chest, confined lungs, distorted spine, and deformed legs, are so many evils which often originate in such practices. This is explained by the fact of the bones in infancy being comparatively soft and pliable, and if prematurely subjected by these contrivances to carry the weight of the body, they yield just like an elastic stick bending under a weight, and as a natural consequence become curved and distorted. It is highly necessary that the young and inexperienced mother should recollect this fact, for the early efforts of the child to walk are naturally viewed by her with so much delight, that she will be apt to encourage and prolong its attempts, without any thought of the mischief which they may occasion; thus many a parent has had to mourn over the deformity which she has herself created. It may be as well here to remark, that if such distortion is timely noticed, it is capable of correction, even after evident curvature has taken place. It is to be remedied by using those means that shall invigorate the frame, and promote the child's general health (a daily plunge into the cold bath, or sponging with cold salt water, will be found signally efficacious,) and by avoiding the original cause of the distortion—never allowing the child to get upon his feet. The only way to accomplish the latter intention, is to put both legs into a large stocking; this will effectually answer the purpose, while at the same time, it does not prevent the free and full exercise of the muscles of the legs. After pursuing this plan for some months, the limbs will be found no longer deformed, the bones to have acquired firmness, and the muscles strength; and the child may be permitted to get upon his feet again without any hazard of renewing the evil.

*The best mode of teaching a child to walk*, is to let it teach itself, and this it will do readily enough. It will first learn to crawl: this exercises every muscle in the body, does not fatigue the child, throws no weight upon the bones, but imparts vigour and strength, and is thus highly useful. After awhile, having the power, it will wish to do more: it will endeavour to lift itself upon its feet by the aid of a chair, and though it fail again and again in its attempts, it will still persevere until it accomplish it. By this it learns, first to raise itself from the floor; and, secondly, to stand, but not without keeping hold of the object on which it



has seized. Next it will balance itself without holding, and will proudly and laughingly show that it can stand alone. Fearful, however, as yet of moving its limbs without support, it will seize a chair or anything else near it, when it will dare to advance as far as the limits of its support will permit. This little adventure will be repeated day after day with increased exultation; when, after numerous trials, he will feel confident of his power to balance himself, and he will run alone. Now time is required for this gradual self-teaching, during which the muscles and bones become strengthened; and when at last called upon to sustain the weight of the body are fully capable of doing so.

Of late an American invention, called the Infant Gymnasium, or Baby Jumper, has come into use. It is an apparatus for the self-exercising of young children, invented by Mr. Rogers of New York. It would seem to afford a harmless and healthful mode of exercise, and from all accounts, an exceedingly grateful one.

*During childhood.*—When the child has acquired sufficient strength to take active exercise, he can scarcely be too much in the open air; the more he is habituated to this, the more capable will he be of bearing the vicissitudes of the climate. Children, too, should always be allowed to amuse themselves at pleasure, for they will generally take that kind and degree of exercise which is best calculated to promote the growth and development of the body. In the unrestrained indulgence of their youthful sports, every muscle of the body comes in for its share of active exercise; and free growth, vigour, and health are the result.

If, however, the child is delicate and strumous, and too feeble to take sufficient exercise on foot,—and to such a constitution the respiration of a pure air and exercise are indispensable for the improvement of health, and without them all other efforts will fail,—riding on a donkey or pony forms the best substitute. This kind of exercise will always be found of infinite service to delicate children; it amuses the mind, and exercises the muscles of the whole body, and yet in so gentle a manner as to induce little fatigue. The exercises of horseback, however, are most particularly useful where there is a tendency in the constitution to pulmonary consumption, either from hereditary or accidental causes. It is here beneficial, as well through its influence on the general health, as more directly on the lungs themselves. There can be no doubt that the lungs, like the muscles of the body, acquire power and health of function by exercise. Now during a ride this is obtained, and without much fatigue of the body. The free and equable expansion of the lungs by full inspiration, necessarily



takes place; this maintains their healthy structure, by keeping all the air-passages open and pervious; it prevents congestion in the pulmonary circulation, and at the same time provides more completely for the necessary chemical action on the blood, by changing, at each act of respiration, a sufficient proportion of the whole air contained in the lungs,—all objects of great importance, and all capable of being promoted, more or less, by the means in question.

And be it remembered that these remarks apply with equal force to the girl as to the boy. She should be allowed, and even encouraged, to take the same active exercise. Fortunately, this course is followed during childhood; not so, unfortunately (in the majority of cases, at least), after this period. Young females are then subjected to those unnatural restraints, both in exercise and dress, which fashion and vanity impose, to be followed by effects which, though not immediately obvious, are capable of laying the foundation of evils that cannot afterwards be remedied. *A good carriage* is the point aimed at (and to which I particularly refer), and the means adopted for its cultivation fail, after all, in their end, just in proportion to their rigid employment. For this purpose the head is kept erect, and the shoulders drawn back, and they are to be kept in this position not for an hour or so, but continually. To preserve, however, this unnatural constrained position, “requires considerable muscular powers, such as no girl can exercise without long, painful, and injurious training; nor even by this, unless other measures be resorted to in aid of her direct endeavours.” For instead of the muscles obtaining increased power and strength by these efforts (to enforce a good carriage), they are enfeebled, and soon become more and more incapable of performing what is required of them. “This fact soon becomes perceptible; weakness is noticed; but instead of correcting this by the only rational mode, that of invigorating the weakened muscles, mechanical aid is called in to support them, and laced waistcoats are resorted to. These undoubtedly give support—nay, they may be so used as almost wholly to supersede the muscular efforts, with the advantage of not tiring, however long or continuously employed. Improvement of carriage is manifested, the child is sensible of relief from a painful exertion, the mother is pleased with the success of her management, and this success appears to superficial observation fully to confirm the judgment which superintends it. Yet what are the consequences to which her measures tend, and which such measures are daily and hourly producing? The muscles of the back and chest, restrained in their natural and healthful exercise by the waistcoat called in to aid them, and more signally, in after-

life, by the tightly-laced stays or corset, become attenuated, and still further enfeebled, until they are wholly dependent on the mechanical aid, being quite incapable of dispensing with it for any continuance."

By and by a *taper waist* becomes an object of ambition, and the stays are laced more closely than ever. This is still done gradually, and, at first, imperceptibly to the parties. The effect, however, though slow, is sure; and the powers of endurance thus exercised, come in time to bear, almost unconsciously, what, if suddenly or quickly attempted, no heroism could possibly sustain. This increased pressure impedes the motion of the ribs. "For perfect respiration these motions should be free and unrestrained, and perfect respiration is necessary to those changes in the blood which fit it for nutrition, and the other purposes of the animal frame. In proportion as respiration is impeded, is the blood imperfectly vitalized, and in the same ratio are the nutrient and other functions dependent on the blood inadequately performed. Here, then, is one source of debility, which affects the whole frame, reducing every part below the standard of healthful vigour." Quickened respiration soon ensues, the heart becomes excited, the pulse accelerated, and palpitation is in time super-added.

There are still further evils produced by tight lacing. For the pressure being chiefly made on the lower part of the chest, the stomach and liver are necessarily compressed, to the great disturbance of their functions; and being pressed downwards too, these trespass on that space which the other abdominal viscera require, superinducing still further derangements. Thus almost every function of the body becomes more or less impeded. And, again, the girl not being able always to have her body eased in the tight-laced stays, some relaxation must take place. "Under it, the muscles of the back, deprived of their accustomed support, and incapable of themselves to sustain the incumbent weight, yield, and the column of the spine bends, at first anteriorly, causing round shoulders and an arched back; but eventually inclines to one or other side, giving rise to the well-known and too frequently occurring state of lateral curvature. This last change most frequently commences in the sitting posture, such females being, through general debility, much disposed to sedentary habits." Such, though but very slightly sketched, are a few of the evils attending this baneful practice.

But how, then, is a good carriage to be obtained; which is not only pleasing to the eye, but is, when natural, absolutely conducive itself to health? "To insure a good carriage, the only

rational way is to give the necessary power, especially to the museles chiefly concerned; and this is to be done, not by wearing those museles by continual and unrelieved exertion, but by invigorating the frame generally, and more especially by strengthening the particular museles through varied exercise alternated with due repose. Attention to general health, suitable diet, regular bowels, moderate but regular exercise, not of particular museles only, but of the whole frame, cold-bathing or sponging, and other such measures will maintain a good carriage, by giving that power which the more direct means so generally practised serve but to exhaust." In these few remarks on "a good carriage," I have drawn freely from a valuable article of Dr. Barlow's in the Cyclopædia of Practical Medicine.

# DOMESTIC SURGERY.

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## RULES FOR RESTORING SUSPENDED ANIMATION, FROM DROWNING, ETC.

1. That some of the plans generally used for resuscitating drowned persons are pernicious and are founded on erroneous principles; of such a nature are the following. Hanging a person up by the heels; setting him on the crown of his head; rolling him on a cask. These practices are not calculated to perform the intended office, but are fraught with danger. There is much hazard of bursting some blood-vessel in the brain, or lungs, by such treatment, and consequently of rendering some cases incurable, which the nature of the original accident had not made so.

2. That as soon as a report of a person being drowned should be heard, blankets should immediately be conveyed to the water side, in which the body is to be folded up, the wet clothes being first removed. In addition to these a *warm shirt*, or waistcoat, from the body of a living person will have its use. If the sun is out very hot, the body may be exposed to it, while, at the same time, frictions, and the means hereafter to be recommended, are also to be had recourse to.

3. That when the sun is not sufficiently out, the body should be conveyed to the nearest house where conveniences can be had; but in removing the body to a proper place, an improper position should be avoided. To carry it over a man's shoulder, or to lay it on a resisting body, as a board, with the belly downward, is improper, the chest is by these means compressed, and the natural effort to breathe, if such effort should happen, will be impeded. A cart is the best conveyance, it gives considerable, though temperate agitation to the body, which will never do harm, and often be

serviceable. The body when placed in a cart should be kept stretched out, the head and upper parts should be elevated without the neck being bent, and the body laid on its side. When a cart is not at hand, the body should be carried on the shoulders of two men.

4. That when the body is properly situated in a house, no more persons should be admitted than are absolutely necessary. The plans immediately to be followed, will depend on the state of the body. Where a little of the natural heat still remains, brisk agitation may recall the latent principle of life, and is therefore in such a case to be followed, together with other aids, especially frequent inflation of the lungs by bellows, the beak of which is to be inserted into one nostril, while the mouth and other nostril is kept closed. This being done, the process is merely to force in air, and compress the chest alternately. If it could be done, it would be much more convenient to pass a curved tube into the windpipe a little way, and inflate through this; as in the former way, it is certain much of the air will pass into the stomach which the pressure on the chest will force into the intestines. The following method of preparing and using a curved pipe would succeed.

Take a tin tube, five inches long, the bore of which is equal to a large goosquill. This tube must be rounded off smoothly at that end which is to be introduced into the windpipe, and must be curved to an obtuse angle, at about one inch from the end that is to enter the windpipe; to the straight end of the pipe is to be tied a bladder, with the cavity of which the tube is to communicate. Having thus prepared the apparatus, the next step is to introduce the tube into the windpipe, and this will be found somewhat difficult to those who are unacquainted with the relative situation of the parts of the throat, but may be attempted by some intelligent person, if strict attention is paid to the rules here mentioned. The person should place himself on the right side of the patient, and introducing the fore-finger of his left hand at the right corner of the patient's mouth, he should push the point of it over the lid that covers the windpipe, and using this as a director, he may pass the tube which he holds in his right hand at the left corner of the mouth, till the point is beyond his finger, and it will fall into the proper situation. Having fixed the apparatus so far, the next step is to tie the bladder over the beak of a pair of bellows, and so inflate the lungs and compress the chest alternately. But a much better and safer mode of performing artificial respiration than that of inflating the lungs, is the following :—

Take a piece of calico, or sheet, about six feet long and eighteen inches wide ; tear it from each end into six strips each three inches wide, so as to leave in the centre of the cloth a portion untorn, of about two feet long, which part is to be placed under the back of the person, and the torn ends brought up on each side, and the stripes interlaced alternately in front of the chest, and the ends gathered into a knot, which is to be held by an assistant on each side, who, by pulling strongly and slowly together and alternately relaxing the strain, will compress the chest and allow it to become dilated, very nearly as in natural breathing, about twenty times a minute. At the same time the head should be thrown moderately back, and the mouth kept open and clear from froth, &c.

5. That when the heat of the body is extinct, it is much to be doubted if agitation will have any effect, therefore it would be useless to employ time about it which might be better spent. The first step must be to attempt to restore the heat. The body must be kept warm in a hot bed, by the frequent repetition of hot blankets; by placing hot salt or sand to the feet, sides, and armpits, and by rubbing the body with hot salt under the blankets; to keep off external cold. Where hot water can be had, a bath is one of the best means of communicating heat. One part of boiling water to two or a little more of spring water, is quite sufficient at first, as at this time it will be improper to apply too much heat; by the gradual addition of warm water, the heat may be brought to exceed the healthy degree a little, that is, to about 100 degrees of Fahrenheit. While these, or the means before advised, are going forward, a glyster of common warm water, and a spoonful of salt should be thrown into the bowels by a bag and pipe. In every instance, perseverance should be urged, in one instance, it was kept up for *eight hours and a half*, before any signs of revival appeared. The first indications of returning life are usually a slight sob and a fluttering of the heart. The efforts should now be redoubled, the frictions steadily kept up. So soon as the patient can swallow, a small quantity of weak wine and water, warm, should be given, taking great care that it does not go into the windpipe.

When the breathing and circulation are restored, the patient must be carefully watched for hours. If insensibility continue, or should recur, blood should be very carefully drawn from the head by cups, and warm applications made to the feet while the purgative injections are repeated.

The person should be kept warm in bed, and warm drinks given, so as to promote perspiration.



## BURNS AND SCALDS.

These two forms of injury require the application of the same principle of treatment, and may therefore be considered under the general term, burns, or, injury done to the person, by the application of heat, whether of hot water, metal, fire, or explosion of gunpowder.

The injury done may vary greatly in degree, from the production of mere redness, without destruction of the outer skin, to the charring, and consequently the destruction of both the outer or false, and the inner or true skin, and even the soft parts beneath. The application of hot water, at, or even below the boiling heat, will effect the first. The direct application of fire, or the explosion of gunpowder, will cause the second degree of injury. The symptoms of the slighter injury are redness of the skin, particularly about the margins of the scald or burn; the rising of the skin into blisters, sometimes of large size (called vesications), and acute pricking pain. This pain continues for many hours perhaps 12 to 18, without relief; at length it subsides, and the redness diminishes in the course of three or four days—the skin over the blisters dries, and comes off.

*Treatment.*—All remedies that relieve the pain are objectionable; most remedies that increase it, are so far useful: grated potato, cold water, ice, &c., relieve the pain so long as they continue to be applied; but on removal the pain returns, as at first, or little mitigated, and continues as though nothing had been attempted for its relief.

Remedies that create and increase pain are followed by what is termed reaction, or rather exhaustion of the pain, and the action of the excited nerves subsides. To effect this, oil of turpentine may be used, or spirits of wine, or a strong solution, ten grains to an ounce of water, of lunar caustic (nitrate of silver). Either of these remedies should be applied freely to the part, or hot water may be substituted if it be nearer at hand, for much depends on the earliness of its application. If the hand, or other part, being scalded or slightly burned, were immersed in a jug of hot water, as hot indeed as can be borne, and then removed, and reimmersed repeatedly, having an addition of hot water to continue, or rather to heighten, the temperature, and this were repeated for one quarter of an hour or longer, the pain would quickly subside, and the process of cure proceed rapidly. After the application of these stimulating remedies, the only advantage derived from which is, probably, the pain they produce, the part

should be covered closely in a thick layer of wadding, or eared, or raw cotton, and then rolled with a calico roller. In this condition it should be left for two, or sometimes three or four days. Indeed, there is no reason for the removal or change of the cotton, so long as the pain does not return, or the part does not exhibit moisture oozing through the roller. Should pain return the cotton may be taken off, and the stimulant (but in a somewhat milder form) be reapplied.

The above treatment of the first stage of burns will also be applicable to the cases of greater injury than those described, in which partial destruction of the skin occurs in some places, accompanied with simple redness in others, but of course the period of cure will be protracted. In the more severe form of burns the entire skin is charred, the surface underneath may be blackened, or red with bloodvessels; the pain is very great, attended by cold chills, and general depression of the system.

*Treatment.*—The patient, being undressed, should be put in a warm bed, the black, loose skin quickly washed off with a soft sponge. The whole surface should then be washed with oil of turpentine, or alcohol, or some kind of spirit, or solution of lunar caustic. If the injury is so great as to threaten the life of the patient at the time, from the great depression and sinking, the additional pain may be injurious, and the application should be made with some caution. When made, the surface should be wiped dry, covered with flour applied with a flour dredger, and then covered over with thick wadding, cotton, or flocculent lint, and rolled; from fifteen to forty drops of laudanum may be given in hot brandy and water, and the patient allowed to sleep. Under similar circumstances to the former treatment, the question of removal of the dressings must depend on the recurrence of pain, except that the injury being more extensive, and the destruction of parts greater, there is no hope of the skin healing without the formation of large and deep wounds. It may be necessary to reapply the cotton, turpentine, and flour. The subsequent treatment consists in keeping the wounds clean, applying poultices, or spermaceti dressing, according to the degree of comfort afforded by either, and supporting the general health by cordial medicines and good diet. Should inflammation occur of any internal organ, or, what is perhaps more probable, should sinking threaten, the powers must be sustained by brandy and ammonia, and blood should, under any circumstances, be taken with great caution and very sparingly.

## CORN AND BUNIONS.

A corn is that well-known, troublesome thickening of the skin, which occurs on the feet, from the pressure and irritation of tight shoes. There is not only a thickened state of the external skin, but a kind of root extending more or less into the subjacent fat; a small cavity is also found between the cutis and cuticle called *bursa*. There are two kinds of corns, dry and horny, and soft and moist. The hard corn may occur on any part of the external surface, but generally over a projecting portion of bone,—while the soft corn is formed between the toes, commonly between the little and fourth toe. The former, after being soaked in warm water and well rubbed with soap, may be removed by any fine, sharp cutting instrument, or rasp, care being taken to remove every portion, and not to wound the part beneath; or they may be touched twice a day with muriatic acid, strong acetic acid, or a solution of nitrate of silver (lunar caustic). The texture of the skin is thus destroyed, and after a few applications the corn readily peels off. Another simple, and often effectual, method is to spread a thin piece of linen or calico with diachylon or other simple ointment, and lay it on the part affected, and over this a piece of buckskin leather, with a hole made in it the size of the corn; thus the pressure of the shoe is taken off the corn, and thrown on the surrounding parts. When an abscess forms under the bursa of a hard corn, the skin must be carefully pared off, and an opening made into the bursa to allow the escape of the small quantity of matter which gives rise to the pain. The treatment of soft corns is much the same as the above, but caution must be used in applying strong acids or caustic, lest they penetrate to the parts beneath. If the toes are in any way displaced they must be brought into their proper position, and the patient should be provided with a shoe of soft leather of a proper shape and width.

A *bunion* is caused by an inflammation of the bursa mucosa at the inside of the ball of the great toe,—the surrounding parts become thickened and indurated, the bones of the joint enlarge, and, after a time, suffer a kind of displacement. In the early stage the inflammation should be subdued by leeches, poultices, and fomentations, or the Goulard water may be constantly applied on linen rags. If an abscess form it should be opened with a lancet; poultices should afterwards be applied, and then a dressing of brown or spermaceti ointment. Rest and the horizontal posture should be observed as much as possible, and wearing a

piece of soft leather, with a hole corresponding to the size of the bunion, as recommended for corns, will afford comfort and relief to the patient.

## DISLOCATIONS.

By this term, we understand a displacement by violence of one part of a joint from its natural connexion to the other. By a knowledge of the structure of the joint we are enabled to lay down rules by which the displaced bone may be returned or *reduced*. The ligaments which have been torn asunder reunite, and the joint regains its healthy structure. The sooner this is done the better, and the easier will it be effected; but the attempt may be made even after the expiration of three or four weeks, if in the larger joints. After this period the displaced bone adheres to the part it is in contact with, and the attempt should not be made but by an experienced surgeon. After the reduction, inflammation of a mild character may follow, which the application of a few leeches will suffice to remove. The joint may be bound up lightly with a wet band, and cold water, or vinegar and water, applied.

### DISLOCATION OF THE LOWER JAW.

*Symptoms.*—The mouth is fixed open, pain in front of the ear, and extending up to the temples. This state of the jaw occurs suddenly, while gaping, eating, or talking, while the jaw is in motion.

*Mode of Reduction.*—Place the patient on a low seat, cover the two thumbs with a silk pocket-handkerchief, pass the thumbs into the mouth, and press with force, slowly applied, on the last four lower teeth, and, at the same time, raise the chin, pushing the jaw backwards. Considerable pressure is required by the thumbs; two pieces of wood may be employed as a substitute for the thumbs.

### DISLOCATIONS OF THE END OF THE COLLAR BONE.

Either end of the collar-bone may be dislocated by a blow or a fall; indicated by a swelling over the joints, which the bone forms either with the breast-bone or shoulder-blade, and by the suddenness of its occurrence. The treatment is very much like that of fracture of the collar-bone, to which reference must be made. A pad of lint should be put on the swelling, and the arm raised high in a sling. This accident will require three weeks' rest.

## DISLOCATION OF THE SHOULDER.

*Symptoms.*—Flatness of the shoulder, compared with the roundness of the sound side. Inability to move the arm; the elbow placed at from two to three inches from the side, the attempt to press it to the side occasioning pain in the shoulder. If the fingers be passed up under the arm to the armpit, the head of the bone will be felt out of the socket, and may be revolved to make it perceptible.

*Reduction.*—A round or jack towel, through which the arm should be drawn; the towel carried up to the armpit and twisted over the shoulder, and the two ends thus twisted passed over the back of the neck, and fixed into a staple by a rope or otherwise. Wash leather, or other soft material, to be wound around the arm, just above the elbow; a clove hitch knot of good quarter-inch line made upon it. The patient to be placed in a chair and held firmly, or to lie down on a bed and to be fixed. The arm to be drawn *slowly* and *steadily*, at an angle half-way between horizontal and vertical, viz.: about  $45^{\circ}$ , and the extension to be continued from ten minutes to a quarter of an hour, during which, frequently, the surgeon or superintendent should raise the arm near the upper or dislocated end upwards, with his two hands, with some force. The head will return into the socket with a sound, a slight shock. If the head of the bone be thrown forward on the chest, the extension to be carried a little backwards; if backwards, a little forward. After reduction, a sling and three weeks' to a month's rest.

The reduction may be also effected by laying the patient on the ground on his back, while the operator, placing his right heel in the left armpit if the dislocation occur on the left side, and his left heel in the right armpit if it occur on the right side, makes powerful extension on the affected arm by both his hands.

## DISLOCATION OF THE ELBOW JOINT.

The elbow joint consists of three bones, the bone of the arm spreading out across the joint, and the radius outside—the ulna inside. The most common dislocation is when both radius and ulna are thrown backwards.

*Symptoms.*—Joint motionless, a little bent; skin tight in front of the joint, a projection behind formed by the elbow, which, with its tendon, are pushed back. The joint can neither be bent nor straightened.

*Reduction.*—Two men will suffice generally, unless the patient

be very muscular. Extension to be made in a straight direction by both. The force required is not generally very great, and the reduction takes place commonly with a snap. Both bones may be forced forwards when this accident occurs—the elbow (olecranon) is broken. The imperfect line of the joint will be readily observed when a comparison is made with the opposite joint.

*Reduction.*—Simple extension as before, and when reduced the joint should be placed straight and bound on to a splint. This accident will require from five to six weeks; other accidents of this kind occur to the elbow joint, but they may all be treated on the same principle, viz.: forcing the bones back to their natural position, which may be ascertained on comparison with the opposite sound limb, or the limb of another person.

#### DISLOCATION OF THE WRIST JOINT.

The hand may be forced backwards or forwards, but this accident is very uncommon. The nature of the case will be apparent to the slightest observation.

*Reduction.*—The hand should be grasped firmly by a powerful man, and drawn straight. If the hand slips, a bandage may be applied around it to aid the application of the extending force, but all that is required is full extension, by which the hand may be drawn straight.

The same observations will apply to dislocation of the fingers.

#### DISLOCATION OF THE HIP JOINT.

These dislocations are very important and very numerous, being not less than four in number. The hip joint consists of the head of the thigh bone and the socket formed by the pelvis, or continuation of the haunch bone towards the middle of the body. These accidents generally arise from a fall from a height, or a very severe blow, and are attended with severe injury to the structure of the joint and surrounding parts, although the consequences are not generally so severe as fracture of the neck of the thigh. (See p. 275.) The head may be thrown from the socket in four directions:—1st, upwards and backwards; 2d, backwards; 3d, downwards and inwards; and 4th, upwards and inwards. The most frequent is the first, upwards and backwards.

The *Symptoms* are, shortening of the leg to the extent of about two inches. The foot is turned in, and lies over the opposite foot, the ball of the great toe towards the opposite instep; the leg cannot be turned out, nor the attempt made without pain. On examining the side of the buttock where the head is thrown, it



will be felt on the bone, with the great projection formed by the end of the shaft of the bone placed in front of it. If the leg is rotated, the head and the great process or prominence (trochanter) will be felt to revolve also. The line of the thigh is altogether too far outwards.

*Reduction.*—A round or jack towel should be applied, as in the case of the dislocation of the shoulder, and drawn up around the thigh as high as possible, and twisted over the hip bone somewhat tightly, and fixed behind into a staple. Wash leather, or a soft towel, to be wound around the thigh, above the knee, and around this the cord or line with two clove hitches, one on each side of the thigh. The aid of six men will be required, who must draw very slowly and very cautiously. The patient should be placed nearly on the sound side, and the limb should be drawn a little across the other limb; and, after it has begun to descend, yet a little more across the opposite leg. When the thigh is fully extended it will generally reduce itself, and may be heard to return into the socket with a snap. Should it not do so, the superintendent should take the thigh high up towards the trunk, in his hands, and raise it, and use a round towel, passed under the limb and over his neck, and raise it, *twisting it outwards* at the same time.

#### DISLOCATION BACKWARDS.

The *Symptoms* are nearly the same, except that the shortening is less and the turning in of the foot less also; but both the symptoms exist in a degree. The head of the bone lies lower down, and is less apparent to the hand when pressing on it.

The *Reduction* is effected by the application of nearly the same means. The limb should, however, be drawn rather more over the opposite limb. When fully extended, it should be turned outwards, when the head will slip into the socket.

#### DISLOCATION DOWNWARDS AND INWARDS.

*Symptoms.*—The leg is a little lengthened, and is drawn forwards on the trunk; or, if placed straight downwards on the ground, the trunk will be bent forwards as in a stooping posture; the toe points a little outwards. The line of the thigh, when compared with its fellow, is directed too much inwards towards the middle of the body, and also too far backwards. The thigh should be moved in all directions, slightly, to ascertain that it is fixed in this position.

*Reduction.*—Apparatus applied as before, patient lying on his back; extension to be made *downwards and outwards*, and when

brought down, after some minutes' extension, the thigh should be forced in its upper end, outwards, by the hand or the towel being placed between the thigh and drawn in the direction opposite to that of the dislocation, viz. : upwards and outwards.

#### DISLOCATION UPWARDS AND INWARDS.

This is the most formidable of all these dislocations. *Symptoms*.—The leg is shortened, and like the last dislocation, drawn forwards on the body, as though in the act of stepping to walk. Both these last symptoms are more strongly marked than in the former. A swelling, caused by the head of the bone, is apparent at the groin, and the bone is firmly fixed.

*Reduction*.—The same means as before, and nearly the same direction as the last accident, except that the limb should be drawn outwards and more *backwards*. These two last dislocations may be reduced in the sitting posture of the patient, and in that position drawn round a bedpost. A month's rest is required, or even more.

#### DISLOCATION OF THE KNEEPAN.

The kneepan (*patella*) may be forced off the end of the thigh bone, either outwards or inwards; but the latter is very rare. Displacement outwards is generally caused by sudden and violent action of the muscles of the thigh. The *Symptoms* are, the appearance of the bone on the outside of the knee-joint, instead of in front, attended with pain, stiffness of the knee, and inability to walk without much pain.

*Reduction*.—The leg must be bent forwards on the trunk, and the knee straightened as much as possible; the bone is then to be forced back by the pressure of the hand. When it is returned, the knee should be very slightly bent, and placed over a pillow. From three weeks to a month will be required.

#### DISLOCATION OF THE FOOT AT THE ANKLE JOINT.

The foot may be forced inwards, outwards, forwards, and backwards. Of these, the second (outwards) is by far the most frequent. It is generally accompanied by fracture of the small or outer bone of the leg, about four inches above the ankle joint. On comparing the dislocated with the opposite foot, the distortion will be apparent. *Reduction*.—The foot should be held firmly, by a strong man, by the heel and by the front, and drawn steadily downwards, and forced back into its position. A little backward

and forward movement of the foot, or the ankle, will facilitate its return.

The other dislocations may be ascertained by comparison with the opposite foot, and should all be reduced on the same principle, and by the same means, as the dislocation outwards above described.

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## FRACTURES.

### MODES OF REMOVING PERSONS INJURED BY ACCIDENT.

By falls or blows the limbs are often broken, and such accidents, severe and painful of themselves, are frequently rendered more serious and agonizing by the awkward and careless manner in which, with the very best intentions of those who afford assistance, the sufferer is carried, with his limb dangling or rolling about, to the nearest medical man.

There is generally little difficulty, even to a not very acute person, in finding out whether the leg or thigh, the forearm, or upper arm, be broken, especially if broken in or near the middle of either of these parts; because not merely is the sufferer incapable of lifting it up, but because, in any attempt to do so by himself or some other person, there is observed an unnatural bending and motion at the broken part.

Persons who break their arms, either below or above the elbow, will find it least painful to put the forearm at a right angle with the upper, in a broad sling, which will contain it from the elbow to the points of the fingers; and if his own home or the doctor's residence be not at great distance, he will find he can walk with much less pain and shaking of the broken part than if he be moved in a carriage of any kind.

If the leg or thigh be broken, a hurdle or a shutter covered with straw, coats, or blankets, may be converted into an excellent litter, which should be laid down by the sufferer's side, and he gently and quickly lifted upon it, by just as many persons as are enough to raise him up a very little from the ground, and by no more, as the greater number of assistants there be, the less likely are they to act together and effectually. The shutter or hurdle should be carried by hand, two persons at each end taking hold of it, and all keeping step as they move along. And if a couple of poles can be procured and fixed across and beneath each end of the hurdle, the bearers will carry with less fatigue both to themselves and the patient. If neither hurdle nor shutter can be ob-

tained, no bad shift may be made by fastening four stout poles together, and tying a blanket securely to them, so as to resemble the frame and sacking of a bedstead, and upon this the sufferer may be laid. Hand-carriage in either of these ways is infinitely more easy than carriage or cart, for every jolt over any irregularity in the road produces motion in the broken bone, and correspondingly severe pain. It is related of the celebrated surgeon PERCIVAL POTT, that he was thrown from his horse in Kent Street, in the Borough, and broke his leg; some of the crowd which soon collected about him kindly offered to get him into a coach, but he begged to be left in the road, where he had fallen, till a door which he purchased, and a couple of chairmen with their poles for its support, could be obtained, on which he was carried home, as he knew that would be the easiest mode of journeying.

Having got the person on the hurdle, shutter, or blanket, it is a good plan to bring the sound limb close to the broken one, and tie them both firmly together with two or three handkerchiefs; by doing this, great support is given to the injured limb, and any movement of it is almost entirely prevented. And besides this, a pillow or long pad of straw, should be placed along the outside of the limb to render it still more steady. In placing the limb great care should always be taken to lay the broken bone as near as possible in its natural direction; for if this be not attended to, but the broken part be left bent, it is far from improbable that one or other end of the bone will thrust through the skin, and thereby materially increase the mischief.

#### HINTS FOR MANAGING BROKEN BONES.

All broken bones should be put under medical treatment where it can be procured. But in newly settled districts, and on ship-board, it frequently happens that no doctor is at hand, or likely to be met with for weeks. To meet such emergency, some hints may be given for the purpose of putting the sufferer in such condition as will be likely to effect a proper and useful cure of his broken limb.

The *materials necessary* for the cure of broken bones are few and simple, and can always without difficulty be provided, as they consist only of linen bandages, about four fingers in breadth, and half a dozen yards in length; of pads which may be made of three or four layers of rug or blanket, lightly quilted together, or pillows filled with tow, cocoa-fibre, chaff, cut straw, or leaves; and of splints, either deal-boards four fingers wide, a quarter of an inch thick, and of length corresponding to that of the broken limb, or wheat-

straws laid side by side to the same extent and thickness, folded up in a cloth, and quilted so as to prevent them moving about, or even the fresh bark of trees.

Broken limbs should not be set, as it is called, that is, bound up with roller, splints, and pads, for the first three or four days, as for some hours after the accident the part continues swelling; if bandaged up tightly whilst this is going on, much unnecessary pain is produced, and if the bandages be not slackened, mortification may follow, which I have known to occur. It is best then, at first, only to lay the broken bone in as comfortable a posture as possible, and nearly as can be in its natural direction; and it may be lightly bound to a single splint, merely for the purpose of keeping it steady. The arm, whether broken above or below the elbow, will lie most comfortably half bent upon a pillow. The thigh or leg will rest most easily upon the outer side with the knee bent. Broken ribs and broken collar-bones are an exception to the general rule, and require immediate attention.—(*Household Surgery.*)

Fractures of the various bones of the skeleton are among the frequent results of violent injuries, occurring at sea as well as on land. The consequence of a broken bone is the entire incapacity of the limb or the part to perform its functions in the economy, and of course the loss of the services of the affected person, until the bone is not only united, but so firmly knit as to render him fitted for a cautious return to his duties. A bone requires for this purpose a period proportionate to its size, bulk, &c., the extremes being from about three weeks to twelve, for what is termed *simple* fractures; but in *compound* fractures, (viz.: where the soft parts about the broken bone are largely torn, communicating with the external air by a wound of the integument) these periods must be greatly extended. First, with respect to **FRAC- TURES OF THE SKULL**, little can be said on this subject, inasmuch as the injury is essentially dangerous in its nature, and the aid from surgery comparatively less than in ordinary fractures. If it be attended with deep sleep, snoring, and insensibility to pain, evidenced by pinching, &c., it may be inferred that a portion of bone is pressing on, or into, the brain.

Whether the external skin be broken or not, an examination should be made, provided the situation of the blow be clearly indicated by the fracture being perceptible to the touch, or by blood being effused under the skin. A cut should be made of two or three inches in length down to the bone; if arteries bleed, they should be seized with a pair of forceps and tied with a piece of silk thread, the ends of which may be cut off. When the bone



is exposed, by one or two incisions as may be required, the depressed bone should be raised by a chisel, or some similar instrument, to its natural level; any pieces of separated bone should be removed entirely, the surface sponged clean, and lastly, the skin or scalp brought together; the hair around having been shaved off, the wound is to be reunited by sticking-plaster. From twelve to sixteen ounces of blood may be taken from the arm about twenty-four hours afterwards, when inflammation appears, supposing little blood to have escaped from the wound, either at the time of the accident or the operation, if the pulse become full and the skin hot, and the brain excited.

#### FRACTURE OF THE COLLAR BONE.

Fraetured collar-bone is indicated after a fall or blow on or about the shoulder, by irregularity of the line of the bone, and inability to move the arm, attended by pain on pressure at the suspected part, where will be found, more or less prominent, a small swelling. This swelling or prominence is formed by one broken end of the bone projecting over the other. The opposite collar-bone should be carefully examined as a guide; if the two bones do not correspond, a fraeture may be generally inferred. If the shoulders be drawn forcibly backwards, by a person placing his knee against the back, and his hands on the round of each shoulder, the prominence will be found to be diminished in the case of fracture, and this is the treatment required for the purpose of setting the broken bone. The more fully the shoulders are drawn backwards, the better will the bone be set; the only difficulty in the management of the case consisting in that of retaining them for some weeks in this position. To effect this, a flannel roller is to be employed, of about four inches in breadth, to be carried round the front of one shoulder, under the arm-pit, across the back over the opposite shoulder, under the arm-pit, and again across the back in the form of a figure of  $\infty$ . Pads of lint, or tow, may be put in each arm-pit, to prevent the cutting of the roller. About twelve or fourteen yards will be required for the application. It is indispensable that the roller should be applied while the shoulders are being drawn back by the assistant. The bone will unite in a fortnight, but not firmly within a month or five weeks.

#### FRACTURE OF THE UPPER ARM.

Fracture of the humerus, or upper arm, is not a very frequent occurrence. Like most other fractures, it is difficult to assign to



it its exact cause ; but, doubtless, it arises from violence applied to some part of the arm. The muscles that surround the upper arm (humerus) are very large, and it is only on the outer side that the bone can be clearly felt. When this accident is suspected, each end of the bone should be taken in the hand of the surgeon, and with a force sufficient to ascertain the fact, moved freely. If it be broken, in all probability grating (*crepitus*) will either be felt or heard. If fracture has occurred towards the middle of the bone, it may be treated successfully and without difficulty. If towards either extremity, the time required is longer, and the union will probably be effected in a less perfect degree, as regards the restoration of the form and function of the arm. Three splints should be used, one for the back of the arm, extending very high on to the side of the blade-bone and down below the elbow ; one on the inner side pressed up into the armpit and down to the elbow ; a third on the outer side along the flat of the arm. These splints should consist of wood, glued on to kid leather, and split longitudinally, that they may bend round the arm ; they should be well padded with tow, wrapped up in linen, *very thick*, and most especially so the pad that passes into the armpit.

The head of the pads should exceed that of the splints, so as to prevent their pressure giving pain in any direction. When the pads are made, and all is prepared, the arm should be slowly drawn downwards to lengthen it ; this should be done by a powerful man, but the force applied very slowly and carefully. A second assistant will be required to keep the body of the patient in its position, that it may not be drawn down by the person extending the arm ; this is called counter-extension. The extending force should be applied until the arm has acquired its natural length ; and when this is done, the pads, with the splints laid accurately over them, should be placed in their relation on the arm ; and finally, the splints should be fixed to the arm by a roller or bandage, or by three leather straps, or buckles, passing around the limb, and fixing the splints in their position : they will require readjustment every two or three days. If the fracture be very high, or low, near the elbow joint, the arm should be fixed straight, and the splints applied with especial care to include the part of the arm at which the fracture is felt ; but the extension must be made thoroughly, to the end of bringing to their relative positions the broken ends of the bone. For the union, from about five to six weeks will be required, during which, the splints may be removed three or four times, to ascertain that the skin is not abraded (rubbed), and that the fractured ends of the bone are in proper relation to each other.

FRACTURES OF THE FORE-ARM, BETWEEN THE ELBOW  
AND WRIST JOINTS.

These two bones are very liable to be broken. The bone that extends along the *inner* side of the arm from the line of the root of the little finger is the ulna, and the other the radius. Either may be broken singly, or both. When both are broken, the difficulty of ascertaining the fact is not great. It is more so, generally, when either bone is broken singly; the same means should be resorted to as described in the preceding fracture; probably more or less swelling, and some grating, may sufficiently prove its presence; whether one or both bones be fractured, the treatment of the case will be the same. Two flat splints will be required for the two flat surfaces of the arm. The extension required is greater in fracture of both bones than in the case of a single bone, because the muscles cannot retract the broken bone to any considerable degree, where the other bone remains entire; the two bones being connected closely together. The arm should be placed in a sling, as likewise in the preceding form of fracture, and supported from the elbow to the wrist. It should be placed in the sling with the thumb-side of the hand uppermost, and allowed to remain in that position for a month as the average. The bone will have united, by soft matter, in about ten days to a fortnight; but the arm will not be fit for use under about five or six weeks.

FRACTURES OF THE BONES OF THE HAND AND  
FINGERS.

These fractures also require full extension and the application of two splints of wood, proportionate in size to that of the bone they are intended to support; they require from a fortnight to three weeks. Many weeks will elapse before the functions of the finger are fully re-established.

## FRACTURES OF THE RIBS.

This is not an uncommon accident, generally arising from a blow or a violent fall. One rib may be broken, or two or more; they are more generally fractured behind than before, or at the side; but this will, in some measure, depend on the direction of the blow. It is followed by pain and difficulty of breathing. Pressure of the hand on the chest over the suspected part during respiration, will generally detect fracture if it exist, especially if more than one rib be broken. The treatment consists in employ-

ing pressure, and this is effected by the use of a circular elastic roller, or bandage, either of flannel, or what is far better, of India rubber webbing, as used for braces, but broader. The patient should be desired to take as deep a breath as possible, and while holding in the air, the bandage should be applied around the chest, if flannel, six or eight times; if India rubber, about three times; it should not be applied too tightly, but the person may be allowed to breathe with tolerable freedom, not, however, by the ribs, but by the belly. Inasmuch as this fracture is often attended by injury to the membrane lining of the chest (the pleura), inflammation of the membrane may follow the injury within forty-eight hours; and if his pulse be high, the difficulty and *pain* of breathing be great, and his skin be hot, twelve or sixteen ounces of blood may be taken from his arm, and he should be kept on low diet for a week or ten days, or even longer, and his bowels acted on with a purgative or two.

#### FRACTURES OF THE HAUNCH BONES (PELVIS).

These fractures are rare, and are generally dangerous; they are not very readily detected, and require a good deal of management in the treatment. All that can be said of them in so limited a work is, that the whole pelvis should be bound round tightly with a flannel or calico roller, and fixed as firmly as possible, to keep the broken surfaces together. This pressure should be continued for six weeks or two months, and the most perfect rest ordered. Any attempt to move before the bones are fully united, being attended with considerable danger.

#### FRACTURE OF THE THIGH BONE.

The thigh bone is generally broken by a fall from a height, or a severe blow, and in consequence of the size of the bone requires good management, and a long time to unite. Like other bones it may be broken straight across, forming what is called a transverse fracture, or obliquely, along the bone. In the latter case, the pointed end of the bone may penetrate one of the larger muscles around it, and be held firmly by it. The thigh bone may be broken also at either end. First, close to the hip joint, and secondly, close to the knee. The first of these two latter will form a distinct subject, and no further reference need be made to it in this section. In the common fracture of the thigh bone, a swelling or irregularity in the line of the bone will be met with; if the knee be raised off the bed with one hand, while the other is passed up along the back of the thigh, and by grasping the limb

every here and there, the fracture will be ascertained without great difficulty. The broken limb will generally be somewhat shortened in its length. For this accident four splints are required; one in front, extending from the groin to the knee-pan, one on the inner side, from the upper end of the thigh to the inner side of the knee, a short one behind, and a long splint for the outer side, extending from the armpit down to the foot, but a splint of the entire length of the thigh, from the hip to the outer side of the leg, will suffice. These four splints should not be so broad as to touch each other when the straps or roller is applied around them, nor so narrow as to allow the roller, &c., to touch the skin. If they are too broad they will ride over each other or overlap. The pads must be very thick and very large, and the upper end of the inner splint should be covered to protect the skin from its pressure.

*Treatment.*—The patient being placed on his back, two strong men are to extend the thigh, one holding it below the groin, and grasping it firmly, the other drawing downwards from the knee. The extending force requires to be applied for some minutes, and to be persisted in steadily. A slightly sideway motion will facilitate the adjustment of the bones, but the extension must be applied with great force if the limb be shortened, and continued until it has reached its natural length. The splints may then be applied. If the extension be discontinued even for a few minutes before their application, the shortening will reappear, and it must be renewed. The splints require a good deal of pressure from the roller or straps, in consequence of the thick mass of muscles intervening between them and the bone. The patient should continue to lie on his back throughout. The bone will require from five to seven weeks for its union, during which the splints may be occasionally removed for readjustment. In fracture of the thigh bone close to the knee, *i. e.* within two or three inches, a long splint should be applied at the back of the thigh, extending down the leg to below the calf, and the knee rendered firm and extended. This splint should be firmly rolled to the calf.

*Without Splints.*—The patient must be placed on his back upon a firm mattress, laid on a board resting on the bed-frame, which is better than on the sacking, as that sinks with the weight of the body when resting on it for some weeks. Two thick pads are to be made, of sufficient size to cover, the one the whole of the inside of the sound knee, and the other the inside of the ankle of the same limb. Both limbs must now be laid close together, in the same straight line as the body, resting on the heels, with the toes right upwards; and in doing this care must be taken that the calves of the legs rest flat on the mat-

tress. Thus far done, the body must be kept immovable by one person, who grasps the hips with his two hands. A second person then takes hold of the broken limb with both hands, just above the ankle, and gently and steadily draws it down without disturbing its position, whilst a third places the knee-pad between the two knees, and the ankle-pad between the ankles. The gentle pulling being continued, the sound knee is brought close to that of the broken limb, but a little above it, so that it rests against the jutting inside of the joint, and then, both being kept close together, a pad about as broad as the hand must be turned round both legs, directly below both knees, and around this a roller about three yards long must be tenderly, carefully, and tightly wound, so as to prevent one knee slipping from the other. A strap and buckle will serve the same purpose; or, in want of roller and strap, a handkerchief may be passed twice round and tied, care being taken not to make the knot opposite either of the hard parts which mark the place of the two leg-bones; for if put there it will be liable to cause very uneasy pressure. Both ankles are next to be tied together in like manner, care being taken that that of the sound is above that of the broken limb. A small pad is now to be put between the insides of both feet to guard them against the pressure which is made by binding the feet together, and this completes the whole business.

FRACTURE OF THE THIGH BONE AT THE NECK  
OF THE BONE.

After a fall the bone may be broken at its upper end close to the hip joint. This part of the bone is called the neck, which is a short, oblique portion between the hip joint and the long, straight part or shaft. Its length is about two inches.

Fraeture of the neck of this bone has the following symptoms. The limb is shortened by about an inch, as may be seen by the position of the knee-pan. The foot is turned much *outwards*. It may be brought up straight, but it falls out again, immediately, if the hand be removed, and lies nearly flat on the bed. If the limb be extended to its natural length, a grating of the bone is generally, but not invariably, heard or felt. The limb is very flexible, and may be moved in any direction moderately, but not without pain. This form of fracture, although it generally occurs in old persons, occasionally happens in young, or indeed at any age.

The treatment requires a very long splint, as described in common fracture of the thigh, passing up into the armpit, bound



round the chest, abdomen (belly), and thigh, down to the foot, to which it is also to be firmly applied, with a view to keep the leg as permanently extended as possible. Union of the fractured bones will require from two to three months or more. Somewhat less time is necessary in the case of a patient of middle or youthful age.

#### FRACTURED KNEE-PAN.

The knee-pan (patella) is most frequently broken transversely, but occasionally, in consequence of great violence, the fracture may be longitudinal. It is readily detected by the hand.

The difficulty in the treatment of the transverse fracture consists in the tendency of the muscles of the front of the thigh to draw up the upper end of the bone, thus leaving a space of one or more inches between the broken surfaces. To meet this liability the leg must be raised on pillows, or on a wooden inclined frame placed underneath it to the height of about two feet, at the foot, from the surface of the bed. This position will bend the thigh forwards on the trunk, and straighten the knee. The thigh should then be rolled from the groin downward to within about six inches from the knee, and cross bandages carried around the thigh, above the knee-pan, with a view to urge it gently downwards, the lower end being as gently forced in the opposite direction; this practice will require from three to five weeks, and great care will be required in bringing the limb into use.

#### FRACTURE OF THE LEG BETWEEN THE KNEE AND THE ANKLE JOINTS.

The leg is composed of two bones, an inner larger (the tibia), an outer smaller bone (the fibula). One or both may be broken. The tibia is more frequently broken about two-thirds of the way down. It is detected without much difficulty by passing the hand down the line of the shin, although the displacement may not be great. It is not easy to detect a fracture of the fibula, nor is it of great importance to do so. Extension must be made as in the other fractures, and sufficiently so to bring the broken surfaces together. Two splints only will be required, and they should be applied at the sides of the limb, and bandaged firmly; the leg may be placed either on the side or on the back; the more comfortable position may be selected.\* Fractured leg, involving the tibia,

\* If the side position be selected, the whole body should be turned fully round on the side.



will require from four to six weeks. It may also be treated by placing the limb in a box, with the top and one end removed, and extending from the knee to the foot. The foot should be secured to the end of the box, and the leg surrounded with bran or a pillow.

#### FRACTURES OF THE BONES OF THE FOOT.

The treatment corresponds with that of similar injuries to the hand.

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### BROKEN BONES,

#### WITH WOUNDS OF THE SOFT PARTS RUNNING DOWN TO THEM, OR COMPOUND FRACTURES.

These are very serious accidents on many accounts, and require careful surgical assistance, where it can be obtained. It will not, however, be useless to give a few general hints regarding them, in case no proper aid can be procured.

A compound fracture is serious in proportion to the size of the wound, and the tearing and bruising of the soft parts; the more severe this part of the injury is, the more dangerous is the accident. A compound fracture is most dangerous when a joint is involved in it. It is more serious in the lower than in the upper limbs; is more to be dreaded in the thigh than in the leg, and more in the arm above the elbow than below it. The great object in the

*Treatment* is to make the accident a simple fracture by healing the wound as quickly as possible, which, in the thigh especially, is a very difficult business. In all cases it must be at first attempted to unite the edges of the wound by bringing them lightly together with strips of sticking-plaster; and the limb should be covered with a light, cold, wet linen cloth, which must be repeatedly moistened by squeezing a wet sponge over it, or by sprinkling it with water, as, by evaporation, it becomes dry. The object of this is to regulate the inflammation which, more or less severe, generally ensues. That the evaporation may be kept up, and the limb thereby cooled, it will be necessary to keep the bed-clothes away from it by putting a cradle\* across, over which the sheet

\* The *cradle* to which reference has been once or twice made, consists of some curved iron wires passed through three wooden laths. But one may be easily made by cutting a wash-tub hoop in two or three pieces, and nailing it to two laths.

alone should lie, care being taken at the same time that the edge of the sheet should be lifted up in two or three places, so that there may be a current of air; otherwise the limb will be kept in a steam-bath, and damaged rather than relieved. The use of a cradle is necessary only for the thigh or leg. The arm can lie on a pillow uncovered by the bed-clothes; and if a cradle be used, it is merely for protection from injury.

If happily the wound heal soon, much of the dreaded danger ceases, and after a few days have passed by, the accident is to be treated precisely as if there had been no wound. But unfortunately this is not of frequent occurrence.

In general, after three or four days, the patient begins to get fidgety, cannot sleep, or only gets short and disturbed sleeps. He soon begins to be hot and thirsty; his head aches, he becomes more restless, has one or more shivering fits, and usually becomes more ill towards evening; his mind wanders, or he even becomes delirious, and dies, in the course of ten days or a fortnight, from the violence of the constitutional disturbance caused by the injury. Under more favourable circumstances, and with these symptoms less severe, the wound begins to discharge at first a dirty bloody sort of matter in small quantity, which by degrees increases, and if things go on well, changes its character to that of good matter, which is free from smell, about as thick as cream, and of a straw colour. With the appearance of such matter the symptoms mentioned soon subside, the fever goes off, the sleep and appetite return, and then begins the second contest between the constitution and the wound, which not having united at first, has a long process, in surgical language called *union by granulation*, that is, the formation of new flesh to fill up the gap formed by the injury, to pass through, before the broken ends of the bone can begin to knit together. This is a very perilous stage in the cure of the accident for persons whose health has been broken by intemperance, age, or any other cause; and if the injury have been to the lower limb, they most commonly die, unless the limb be cut off; and even this is a very uncertain remedy. Country people generally do better under compound fractures than those living in towns; and children better than grown-up persons; indeed the very severe accidents which children will scramble through are so astonishing, that with them there is always hope under circumstances which with adults would not hold out the least expectation of a favourable result. If the constitution fail in this second stage, the feverish condition again sets in, the pulse becomes quick and weak, the countenance is flushed with pink, and alternate heat and violent perspiration, general wasting of the body,

loss of appetite, dry brown tongue and restlessness, are soon followed by the person beginning to wander, and then becoming delirious, and death closes the scene. When these symptoms set in, the wound ceases to discharge, or discharges only a thin watery, stinking matter, and has the appearance of being glazed, and not unfrequently the skin and neighbouring soft parts mortify, and if there be strength of constitution to throw off these dead parts, the broken ends of the bone are exposed, generally dead, bare, and of a whitish colour.

Directly the constitutional disturbance begins, the wound must be poulticed, to encourage the formation of matter, as its appearance and production, of a good sort, is, as has been mentioned, a very favourable symptom. The poultice must also be continued till the wound have filled with new flesh to the surface, and indeed that is the best application till it have nearly or entirely healed.

The *Medical treatment* differs in the two stages of the constitutional disturbance. In the *first stage*, when the inflammatory condition is accompanied with strength, it will require checking with occasional doses of calomel and tartarised antimony, which, however, must be employed with great discretion, as not unfrequently, and if the case go on badly, after three or four days the symptoms assume a typhus-like character, and instead of depressing the constitution, it will require support with wine and other stimulants, or the patient sinks at once.

In the *second stage*, the inflammatory stage is of that kind depending on exhaustion, and then at once the constitution requires to be assisted by everything which will prop up and strengthen it; wine, brandy, and strong nourishing broth, or nourishing easily-digested food must be given often in very considerable quantities.

I am aware that in cases of compound fracture, when these severe symptoms set in, it can scarcely be hoped that a person who has not received a surgical education will be likely to be able to carry a case through successfully. But still, writing, as I now am, for circumstances under which no proper medical aid can be obtained, it does not seem out of place even to notice such serious cases, and to lay down a few general rules which may enable an intelligent person to render assistance which might possibly save even one valuable life.

I cannot conclude this subject of Broken Limbs without mentioning the following history, which used to be related by one of the HUNTERS in his Lectures, as it affords encouragement for an unprofessional person making attempts to treat a broken limb when no doctor can be procured, and also shows how well Nature can manage when left to herself. A madman at Edinburgh,

being sometimes sensible, had the privilege of walking in the garden of the mad-house with a keeper. He one day attempted making his escape whilst the keeper was at a short distance, and getting to the top of the wall, which was but a little height from the ground on the side next the garden, jumped down on the other, where the ground being much lower, his fall occasioned a compound fracture of the leg. He was carried to the infirmary, the fracture reduced, and secured by the eighteen-tailed bandage and splints. He was very unruly all the time the surgeons were engaged in setting the limb; but as he seemed pacified afterwards, they left him, hoping he might get some sleep. As soon as they had withdrawn, he very carefully took off the splints, bandages, &c., and placed them in the same manner on the sound leg. Then tearing a hole in the ticking of the bed, he thrust the fractured leg among the feathers. When the surgeons came next day and took off the bandage, they were surprised at not finding any fracture. The physician who was present, as in those days it was customary for the physician and surgeon to visit together, asked the surgeon how this had happened. The surgeon replied he could not tell; he was certain there was a fracture the day before. At this the madman was very angry: "Pretty fellows," he said, "not to know when a leg was broken; but to bind up a sound leg for a broken one!" The doctors then insisted on seeing the other leg, which the patient said was very well, and pulling it out from the bed, shook it at them, saying, "See, this is a sound leg." Upon examination they found the feathers had become so elugged to it by the blood, as to keep the broken bone in place and admit of his stirring his limb about. As the tension seemed nowise increased, they thought it best to humour him, and let the leg remain as it was, as he possibly would undo all their work. So to please him they bound up the sound limb again with bandages, splints, &c., leaving the other to itself, and it did perfectly well, the feathers not falling off before the bones were consolidated, and no ill accident resulted. The whole matter is readily explained; the elotted feathers formed as complete a cast as if plaster of Paris had been used, a mode of treatment sometimes required when a troublesome patient cannot be managed in any other manner, by which the broken bone is kept perfectly steady, and thus is in the best condition for union.—(*Houschold Surgery.*)

## SPRAINS

Are injuries done to the ligaments, tendons, and other structures surrounding the joints. They are produced by jumping, falling, or other causes which forcibly stretch or lacerate them. The joints most liable to sprains are the wrist and ankle joints: the wrist joint becomes sprained in consequence of the arms being naturally thrown out by persons in falling, to prevent their being seriously injured, by which means the whole weight of the body is thrown on the wrists, which not only sprains those joints but sometimes fractures them. The ankle joint is frequently sprained by jumping from a considerable height, or the foot turning under the weight of the body. Sprains are attended with great pain at the time of the accident, and also with considerable swelling and discoloration of the injured part; the swelling and discoloration arising from the effusion of blood into the surrounding structures. The joints at first can be easily moved, but as the swelling and inflammation increase, all motions become painful, the patient is unable to use the injured limb under any circumstance whatever.

In the treatment of sprains the injured limb must be kept in a perfect state of quietude, and in such a position as to relax the muscles in connexion with the affected tendons, as well as to favour the return of the blood to the heart. He must be kept in the recumbent position; evaporating lotions should be kept constantly applied to the injured parts, by means of linen rags wetted in the following lotion, and which should be renewed as often as they become warm.

Take of Goulard Water, 8 ounces,  
Gin, 4 ounces,  
Camphor Mixture,  
Mindererus Spirit, of each 2 ounces.

Make a lotion, which should be kept in a cool situation until required for use.

This practice should be continued for the first twenty-four or forty-eight hours; after which period, should the swelling or pain increase, leeches may be freely applied to the parts affected, and the bleeding freely encouraged by means of a sponge and warm water constantly applied to the leech-bites. Hot fomentations should afterwards be applied by means of flannels wrung out of a decoction of chamomile flowers and poppy heads, and the bowels kept in a free state by the following mixture:



Take of Epsom or Rochelle Salts, 1 ounce,  
Antimonial Wine,  $\frac{1}{2}$  ounce,  
Mindererus Spirit, 1 ounce,  
Syrup,  $\frac{1}{2}$  ounce,  
Camphor Mixture, 3 ounces.  
Mix.

Two tablespoonfuls to be taken every three or four hours until the bowels are freely acted on. By this treatment the disease will rapidly subside, and the parts will return to their usual healthy condition in persons of sound health. The patient should not be allowed to make use of his limb too soon, as the irritation and inflammation of the joint will be kept up, and thus he may suffer from it for months, or even years. When all signs of the disease have disappeared, the motions of the part may be promoted by gentle exercise, and the following liniment may be rubbed night and morning :

Take of Soap Liniment, 1 ounce,  
Olive Oil,  $\frac{1}{2}$  ounce,  
Tincture of French flies,  $\frac{1}{2}$  ounce.  
Mix.

The parts may be afterwards supported by a roller, or it may be found necessary to envelope them in straps of soap plaster, in addition to applying the bandage.

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## WOUNDS

Are either incised, lacerated, contused, or punctured. They are called incised wounds when they are made with a sharp cutting instrument, as when a shoemaker cuts himself with his knife, or a carpenter with his chisel. They are called lacerated when the flesh is torn, either by machinery, hooks, or other blunt instruments. Wounds are said to be contused when there is an irregular breach of surface, accompanied by injury and a bruised condition of the surrounding parts. They are generally produced by falls or blows of blunt instruments. Punctured wounds are produced by the forcible entry of sharp instruments, such as bayonets, swords, scissers, hooks, or the pointed ends of broken bones.

*Treatment of Incised Wounds.*—It has been observed before, that incised wounds consist of a mechanical division of parts by a cutting instrument; all, therefore, that is necessary to be done, is to bring the edges of the wound nicely together, and maintain



them in that position until union takes place. This is effected, if the wound be trifling, by means of straps of sticking-plaster, which should be so applied as to preserve the edges of the wound in apposition. If the wound be of considerable extent, and bleeds freely, the first thing to be done will be to arrest the hæmorrhage; this will be effected, if the bleeding vessels be small, by making pressure with a sponge for some considerable time: all extraneous matter should be cleared off, and the lips brought together; a piece of lint should then be dipped in the blood and placed over its edges; this is found to be an excellent application, as the blood, in drying, in consequence of its adhesive qualities, seems to maintain the union of the edges of the wound. In the course of four or five days, the parts will be found to be united, unless some accidental circumstances, such as too great a degree of inflammation or an untimely meddling with the dressings, should occur. The strappings or dressings should on no account be disturbed before the fourth, fifth, or sixth day, unless the parts should be in great pain, or much swollen. If the incision takes place about the cheeks or lips, or other parts, which are unsupported, and where sticking-plaster could not be applied, it will be necessary to put in two or three ligatures, according to the extent of the wound. Should the parts swell, a cooling lotion may be applied, such as Goulard water, and the bowels should be kept in a free state. When the edges of the wound are to be maintained in apposition by means of ligature, the ligatures are to be inserted in the following way: the needle which is used on the occasion, and which may be either curved or straight, being armed with a fine thread, or a piece of silk, which is to be previously waxed with a piece of white wax, is to be passed through both edges of the wound and drawn forwards until one end of the ligature passes through also; then both ends are to be tied, and afterwards cut off close to the parts.

*Treatment of Lacerated Wounds.*—Lacerated wounds, in consequence of the great injury done to the parts, and from the fact of their not bleeding much, are very subject to active inflammation. If the wound be considerable and the parts much injured, the patient should enjoy perfect rest, and the parts should be covered with cooling lotions. All dirt and extraneous substances being previously washed off, the bowels should be opened by the common black draught. If the inflammation runs high, leeches should be applied, and the bleeding encouraged by the application of hot water; the cold lotion should now give way to fomentations and poultices; the patient should live low. When the inflammation has subsided, the wound may be dressed with basilicon or Turner's

cerate. Erysipelas frequently follows lacerated wounds of the scalp; in this case the parts should be freely fomented with hot water, and the patient should take a fever mixture. Tetanus, lock-jaw, and spasm, often arise from lacerated wounds; in such cases opium should be administered in doses suited to the age and circumstances of the patient. One grain might be given every three or four hours until relieved.

*Treatment of Contused Wounds.*—Contused wounds will require the same treatment as that already described. Cold applications in the first instance, and if inflammation sets in, leeches and hot fomentations. They generally terminate in suppuration and sloughing, or mortification of the parts, according to the extent of the injury: in order to expedite these processes, poultices of bread and water, or linseed meal, should be applied three or four times a day, and when the abscess opens or the slough is thrown off, they are to be treated as common ulcers with basilicon, or some other stimulating ointment, for the purpose of promoting healthy granulations, and thus healing them. During the active stage of inflammation, the patient should live sparingly; but tonics, such as Quinine (*see Quinine*), and a generous diet should be allowed under the stage of suppuration or sloughing.

*Treatment of Punctured Wounds.*—Punctured wounds are extremely dangerous, much more so than the others already described. A punctured wound from a nail, hook, or any other pointed instrument, gives rise to inflammation of the absorbents (a set of vessels running from the wound into the neighbouring glands), and is manifested by red lines taking the course of these vessels. Abscesses of the glands, and of other parts of the body, in their course frequently ensue; and if the matter be deep-seated, such a degree of irritative fever is produced as to cause death.

Lock-jaw (tetanus), and frightful convulsions, are often the result of tendons or sinews receiving punctured wounds. In the first instance the puncture should be laid open with the lancet, cold lotions should then be applied, and if inflammation sets in, the parts should be covered with leeches according to the age and strength of the patient; the diet should be sparing, fomentations and poultices should be constantly applied, and the limb should be supported on an inclined plane, in order to favour the gravitation of the blood towards the body. All stimulating drink should be cut off. The bowels should be kept freely open, and the patient should observe perfect rest. As soon as matter has formed, it should be let out by free incisions with the lancet, after which the parts should be poulticed three or four times a day. In order to allay irritation and pain, and to procure sleep,

great advantage will be derived from the administration of ten grains of Dover's Powder, at bed time.—(*See Dover's Powder.*)

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## RUPTURES.

Labouring persons are more particularly liable to this complaint, which is produced by a portion of one of the bowels slipping out of the belly, generally after great exertion, as dragging or lifting heavy weights, jumping, and the like; though sometimes children are born with the disease.

The most usual seats of rupture are in the groin and its immediate neighbourhood, and at the navel. The latter kind is very common in young children who scream violently, and in common language it is said that "the navel has started."

Ruptures which exist at birth, or which are produced in early life, can generally, by care and attention, be cured before manhood; more especially if at the navel.

If happening after birth, a rupture generally shows itself as a swelling suddenly appearing in the groin after violent exertion; remaining distinct whilst the person stands upright, disappearing when he lies down, and returning again when he gets up. It also usually fills out when he coughs. If left alone it continues increasing in size, so that instead of the bowels being contained, as they should be, in the belly, the greater part drop into the swelling, which may become of an enormous size; and always in proportion to its size is there less disposition in the contained bowels to return back into the belly when the person lies down. Persons who are ruptured often feel a dragging weight about the pit of the stomach, and after great exertion more bowel comes down, and they have an inclination to be sick, which becomes worse till the rupture has, by lying down and gently pressing, either been diminished to its ordinary size, or put back completely into the belly.

Whenever any one finds a swelling at the groin or navel, especially if it have come on suddenly after exertion, he should lose no time in going to the doctor for the purpose of knowing what its true nature is, for if it be a rupture it will require immediate attention; and from want of this many persons have lost their lives. Females often are subject to a rupture, which, from motives of modesty, they conceal, and ask for no assistance till it is too late. The celebrated Queen Caroline, wife of George II., lost her life in this way.

If the medical man determine the swelling to be a rupture, he will recommend a truss or instrument to prevent the bowel slipping out of the belly. If a truss is to be of real use, it should be made specially for the person. The usual way is to go to a truss society or to a surgeon's instrument maker and get a truss fitted. The difference of these two modes of proceeding may be illustrated by the homely comparison of being measured for a pair of shoes and putting on a pair ready made; which fits best everybody knows; and just so is it with the two kinds of trusses.

If the person wish to get cured of his rupture, he should never take his truss off, except for a few minutes to cleanse his skin with a sponge, and this even should never be done but whilst he lies down. The truss should always be kept on, whether up or in bed, and if this plan be pursued by young people under eighteen or twenty years of age, and they be careful not to use violent exertion, a rupture will generally be cured after wearing a truss three or four years.

It is always well for those who can afford it to have two trusses of the same size and strength at the same time, so that in case of the spring of one in use snapping, or it requiring to be mended, the other may be ready to take its place. For if, even for a day, the person be about without his truss, the advantage gained by six or eight months' previous wear will be lost, and all will have to be begun again.

Children whose navel starts may generally be easily managed, by gently pressing the swelling into the navel-hole, and then binding upon it a marble, or a piece of rounded cork sufficiently large to cover, and not go completely into the hole. The marble will be best fastened with some strips of strapping put across it, and passing nearly to the spine on each side; it will require to be removed daily, and the parts having been sponged clean, then re-applied.

Persons who have ruptures should be especially attentive to keep their bowels regular, so as to be moved every day, and not allowed to become costive.

If persons who have ruptures do not wear a truss, or if the truss they wear do not keep the bowel up in its place, but allow it to slip down by the side of the pad, either from the instrument not fitting, or from it not being strong enough to resist the constant exertions of daily labour; or if the truss be worn broken, as is very frequently the case, the person goes about at the risk of his life. It may indeed be, that a person will have a rupture for years, nay, even for his whole life, may wear no truss, and when he lies down the rupture may return, or it may continue down

and incapable of being returned at all, and yet he suffer no inconvenience beyond a little occasional lassitude. But this is the exception, not the rule, and from some trifling circumstance or other the bowel becomes strangled, and the person is certainly destroyed, if not relieved by means presently to be mentioned, or, on failure of them, by an operation, which, however, is not always sure of saving life.

When a person has been costive two or three days, and he becomes violently and frequently sick, at first throwing up stuff like coffee-grounds, and after some hours, like stools, and very offensive: if there be a feeling of a cord tied round the midriff, constant feeling of sickness, much uneasiness and anxiety, there is great reason for supposing that this has something to do with a rupture. The inquiry must then be made if the person have any swelling in the groin or its neighbourhood, at the navel, or anywhere else upon the belly; and if there be such swelling, how long it has been, whether it ever returned, or could be returned, and when it first was unable to be returned; and whether a truss had been worn or not; whether the rupture had ever been thus fixed before, and whether it had been accompanied with vomiting and costiveness, and how those had been then relieved.

If it be answered that the swelling had always disappeared on lying down, or that it could be returned whilst in that posture, till such a time, when the person had over exerted himself, the swelling had suddenly become larger, and would not return with all his efforts, that then he had become sick and vomited, and that the vomiting had become more severe and more frequent, and that the bowels were costive, and whatever medicine was given, or other fluid taken, was almost immediately rejected; then there is little doubt that the bowel has become strangled, and that its contents cannot pass through it to be voided as stools, and are consequently vomited.

*What is then to be done?*—It very commonly happens that persons who do not wear a truss, and who are aware of the nature of their complaint, now and then have some difficulty in getting their rupture up, and feel sickish, and uncomfortable from it being rather larger and less readily inclined to return than usual. They learn, however, some mode of handling the part, and after more or less effort, replace it, and therefore often rely upon their own capabilities, till they get into a very dangerous condition.

In these cases a medical man should *always* be sent for immediately, for if circumstances should require the performance of an operation, its *safety* mainly depends on *its being performed early*, and its *danger* on *its being delayed*. Whilst the doctor is being



fetched, the patient may be put into a warm bath up to his neck, and kept there till he feel very faint; he may then attempt according to his own usual method to put the rupture up, by pressing it gently, if it be in the groin, or by lifting it up if in the purse, and gently squeezing it towards the belly, but no violence must be used, or the gut will burst.

If this do not succeed, cold may be applied over the swelling, by half filling a bladder with pounded ice and a small handful of salt, or with a freezing mixture consisting of Glauber salts and sal-ammoniac, to which some water must be added. Either of these, after being kept on some hours, will occasionally cause the return of a rupture, but they require to be used with some caution, as, if the skin become frosted, it may mortify. If neither ice nor the materials for the freezing mixture can be obtained, a wet rag may be put on the part, and evaporation encouraged by a continued stream of air from a pair of bellows, repeatedly wetting the cloth as it dries; by these means almost as great a degree of cold can be produced as by ice.

Some French surgeons have of late strongly recommended attempting reduction of a rupture by reversing the position of the body, in other words, by putting the patient on his head, or nearly so; and they state that in many instances this method has succeeded. If no medical man can be obtained, it is certainly well worth while to try this plan.

Bleeding a person to faintness often renders the return of a rupture easy, but it should not be used by any unprofessional person, except in situations where no doctor can be had.

It is useless to give purgative medicine by the mouth, as it will certainly be thrown up again, and only renders the vomiting more severe and distressing. The same objection, however, does not apply to a clyster, either of gruel and salt, or gruel and castor oil; these are occasionally useful in assisting the return of a rupture.

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## PILES

Consist in the enlargement of the veins at the extremity of the lower bowel; and very commonly arise from the straining necessary to relieve the bowels in habitual costiveness. By degrees one or more of the veins become gorged with blood, part of which not being returned, but lodging there, a little tumour is formed, which gradually enlarges. Sometimes it remains within the bowel, and is only forced down at the time the bowels are relieved, after which it either soon returns, or can be pushed up with the



finger. But after a time it is continually down, about the size of a small bean, and becoming irritated by the perspiration, it often chafes, and renders walking very distressing. If the bowels be more costive than usual, and their relief need more than ordinary effort, the pile becomes much gorged with blood, which is unable to return. The little swelling then becomes very full and black with the blood it contains; is very painful, often inflames, and either bursts and empties itself, which affords immediate ease, or it runs on to the formation of an abscess, which after a time discharges, and not unfrequently lays the foundation of a fistula. Occasionally the veins inside the bowel become very large and their walls thin, so that the mere effort of relieving the bowels, without much straining, causes them to bleed, and sometimes very freely.

*Treatment.*—The most likely mode of preventing the formation of piles is attention to the bowels, which ought to be relieved daily once or twice, and without foreing. Their proper action is equally beneficial to the health and temper, of which the celebrated Lord Chesterfield was well aware, in the advice he gave to a suitor of making certain inquiries of a great man's valet before venturing to ask a favour. It is best that nature should be invited at regular periods. There is no need of continually taking medicine, if the person be of a naturally costive habit; for if the relief be made to depend on this, the quantity taken will sometimes need to be very considerable, as in proportion to the frequency of taking purgative medicine does its dose require to be increased. Regular exercise is generally sufficient to excite the bowels to proper action; but some persons find it convenient to take a tumbler of cold water immediately on leaving their bed, which serves as a gentle and sufficient laxative. If, however, this be insufficient, it is a most excellent practice to throw up into the bowel, every morning, half a pint or a pint of lukewarm water, either with an India-rubber bottle, or one of the many syringes for this purpose, which are now so common.

When there is a disposition to piles, the person should always, after relieving the bowels, press up very carefully any little knot or swelling which can be felt, and generally by attention to this, and keeping the bowels gently lax, the ailment is got rid of. It is advisable also to bathe with cold water and to pass up the bowel a small portion of lead or gall ointment; and a teaspoonful of lenitive electuary may be taken occasionally.

When a pile becomes very much swollen, full, and cannot be emptied by gentle pressure continued whilst the patient is lying down, and by the application of linen dipped in cold water, it will

be necessary to put on two or three leeches, which may be repeated once or twice; and this will be more especially needful if the pile have become inflamed. Great relief under the latter circumstance is often obtained by freely opening the pile with a lancet, and letting out the clot of blood which often then has formed; this, however, had better be done by the doctor. The person troubled with swollen or inflamed piles should keep at rest for a few days in the horizontal posture, and when the irritation ceases may get up.

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### PROTRUDING BOWEL.

Children who have been much relaxed, from whatever cause, sometimes have a large portion of the bowel protruded, and the same result often happens from nurses putting them on their little chairs, and carelessly allowing them to sit and strain for ten minutes or longer. I have often seen three or four inches of the bowel down from either of these causes. Sometimes it returns with slight pressure, and remains; but at other times is only replaced with great difficulty, as it has become more swollen the longer it is down. At other times, when the protrusion has been of long duration, and of great length, the bowel can be pushed up easily enough, but directly the fingers are removed it protrudes again.

*Treatment.*—When there is the slightest appearance of protruding gut, the child should not be allowed to sit on his chair for more than two or three minutes; and if the bowels be unrelieved, he should be placed on it again at some little interval. The nurse should carefully notice if any bowel be down, and if it be, should lay the child down on his back with the hips a little raised, and then with her finger gently press it up. If the protrusion will not remain up of itself, a T bandage should be put on, and to the tail-piece half a small bottle cork, rounded at one end and covered with linen, should be fastened and made to rest against the bowel. If the protrusion be very considerable, the bowel must be grasped with all the fingers, emptied as far as possible of the fluids in its substance, and then steadily and gently pressed up. If it be much swollen, this will frequently occupy some time; but the effort to replace it must be persisted in till the bowel return, otherwise the piece of gut will slough off, and the child may be destroyed. In all cases when much bowel has descended, the child should not be allowed to sit up, but should be kept in the horizontal posture till the bowel have recovered strength to retain its natural place.

## WHITLOW,

As most people know from experience, is a very painful swelling upon the last joint of the finger, which more or less quickly runs on to the formation of matter. It arises oftentimes without any known cause; at other times, from a hag-nail which has been teased; sometimes from the finger having been bruised, or having been brought to the fire when very cold; not unfrequently from a needle or a splinter running into the finger; and, among laundresses, it is not uncommon from any little crack or wound in the finger becoming irritated by the impure soda or pearlash they use in washing.

There are several kinds of whitlow.

*The most common and slightest form* occurs generally at one side of the root of the nail, beginning with a little inflammation and throbbing, and by degrees a whitish half-transparent bladder is formed, extending more or less round the nail, the whiteness depending on the thickness and clearness of the skin. If not opened, it continues separating the scarf-skin from the true skin beneath, till it find some crack or thin part in the scarf-skin through which it bursts, discharging the matter and sometimes there the business ends, new scarf-skin being formed below, and the old bulging, like the skin of a blister, may be picked off. But if the matter have been pent up for a few days, it frequently ulcerates the true skin, and when it has escaped or been let out, a little red body sprouts up through the hole, and, spreading, assumes a cauliflower appearance, the unyielding scarf-skin girding it tightly. This is generally excessively tender, and can scarcely bear touching.

*Treatment.*—As soon as the blister rises distinctly above the neighbourhood, a pretty large piece should be snipped out, so that the watery matter may readily escape, and continue to flow out as fast as produced. A bread-and-water poultice should be put on, and in the course of a day or two the cure is completed. But when the little red body of proud flesh, as it is called, has shot forth, it is more troublesome and painful to manage, as all the scarf-skin must be cut off with a pair of scissors, to free it entirely from the narrow hole. The pain of this removal must be borne, for otherwise the proud flesh will continue increasing, and become more and more tender the longer it is delayed. Generally, after poulticing a few days, and binding up lightly with some mild ointment, this sore also gets well. Not unfrequently, in both cases, if the whitlow have run completely round the root of the

nail, the nail is destroyed, and slowly pushed off as another is formed at the quick or root, and continues to grow.

The *second kind* of whitlow is formed in the bulbous front of the end of the finger; this is much more severe, as the matter is formed deeper, and the scarf-skin being tougher, will not give way to the matter which desires to escape. The pain extends somewhat into the hand and arm, and the matter occasionally burrows up the finger.

*Treatment.*—Cut through the skin freely and deeply with a knife, in the direction of the length of the joint, and put on a poultice, which will afford almost immediate relief from agony.

This, when very severe, will occasionally run into

The *third kind* of whitlow, which is worst of all, and may also occur independent of the former. In this case, the sheath which contains the tendons of the finger inflames, the finger swells, and unless quickly attended to, the inflammation spreads into the hand, and the tendons and one or more of the bones of the finger are destroyed; or at best the finger becomes shrivelled and stiff.

*Treatment.*—Leeches here should be frequently applied; warm bathing of the whole hand, which should be wrapped up in a bread-and-water poultice. If the doctor can be had, let him make a free cut down to the bone, at latest, after twenty or thirty hours have elapsed from the beginning of the attack. It will give greater relief from the severe pain, and be more likely to check the mischief at once, than if the cut be delayed, which must be made at last.

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## INGROWING NAIL.

One of the deserved punishments which people suffer for the folly of squeezing their feet into narrow shoes and boots, is an ingrowing nail. The toe usually attacked is the great one, and by the continued pressure on its sides, the nail, instead of its ordinary form, becomes narrow, and much arched across. In this state the pressure of the shoe forces the corner of the nail down into the skin. At first there is only a little uneasiness, which ceases when the foot escapes into a slipper. By-and-bye the pressed part feels a little sore, a slight moisture is found on the stocking, and on examining the toe, the pressed edge is found inflamed and tender. Perhaps the person discovers that the nail digs in, and he endeavours to cut away the pressing part; but this usually only makes matters worse, by leaving a sharp corner, which is driven in more deeply as the nail becomes more arched

by perseverance in wearing the tight shoe. The sore now attempts to relieve itself of pressure by producing a little mass of proud flesh, which, however, only adds to the mischief, and at last the person becomes so lame that he is almost unable to move.

*Treatment.*—First get rid of the narrow shoe, so that the toe may be unconfined, and the nail allowed to recover its proper breadth, which, however, it does not do very quickly. Then proceed to relieve the sore skin by the side of the nail of its pressure. It is of no use, however, merely to cut away the pressing nail even freely, and then to thrust a piece of lint under its edge, which is as painful as it is useless; for the nail, if not otherwise managed, will drop, in the course of a few days, upon the old spot, and again render it angry. The proper treatment is, thinning the whole length of the middle of the nail, from its root to its end as much as possible; and this is best done by scraping it perseveringly with the sharp edge of a piece of glass again and again, till the middle of the nail be as thin as writing-paper, and will readily bend under the pressure of the finger-nail. This is at first a rather painful job; but the scraping must be done with a light hand. As soon as the middle of the nail has been thus thinned, it yields to the upward pressure of the skin on its side edges, readily bends, and offers no further resistance. The sore place being then no longer irritated by pressure, the proud flesh soon drops down, and the sore heals. Some persons recommend inserting a bit of lint between the nail and the proud flesh, but I do not, for it is painful and troublesome to push in, and is unnecessary.

If narrow shoes or boots be again used, the foolish wearer may expect a repetition of his plague.

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## INFLAMMATION ON THE SURFACE OF THE EYE.

Slight inflammation of the membrane covering the globe of the eye, and lining the insides of the eyelids, is not unfrequently occurring when the eye has been exposed to a current of cold air. The eye waters, feels as if sand were in it, the white part is reddened, and soon after a little matter is formed, and on waking in the morning the eyelids are felt glued together. Such is the common condition of a slight degree of ophthalmia, as this inflammation is called, which, however, may run on and become so severe, that the eye may be destroyed by it very speedily. Or if the attacks recur frequently, the transparent part of the eye may become so completely dulled that the sight is lost.



*Treatment.*—When in the mild form I have mentioned, it may usually be got rid of by one or two smart purges with calomel and rhubarb, and bathing the eye with warm poppy-water. If after all the pain and redness have ceased the eye feel weak, it may be improved by washing it frequently during the day with a lotion composed of a grain of sugar of lead to a large tablespoonful of soft water.

Infants of a few days or weeks old are very liable to severe attacks of inflammation of both eyes; the lids quickly inflame and swell, and large quantities of matter are discharged from between them. This is a very dangerous complaint, as in the course of two or three days one or both eyes are very frequently destroyed. It is always advisable directly these symptoms make their appearance to send for the doctor at once, as no time should be lost. If he cannot come immediately, it is right to clean out this matter several times a day, by carefully squirting some warm water, with a small bone or pewter squirt, between the eyelids. And if no medical aid can be obtained, on the second day a solution of alum, in proportion of a grain or two to two large tablespoonfuls of soft water, should, after first washing out the eye as already mentioned, be thrown between the lids with a squirt. This kind of inflammation is always much to be dreaded.

The person who syringes the child's eye should *be careful not to get* any of the matter into his own, as the same disease will be produced and speedily destroy the eye, often even under the best treatment.

## PUSTULES ON THE EYE.

Children not unfrequently have form upon the front of the eyeball, either on the transparent or on the white part, a little pimple rather bigger than a millet-seed, sometimes accompanied with inflammation, and at other times without any. Although when the little pustule breaks it generally leaves a little ulcer upon the white of the eye, it is not usually of great consequence; yet if upon the transparent part it is serious, as when the little sore heals it often leaves a small scar, or speck, as it is called, which interferes with the sight.

*Treatment.*—Not unfrequently these little pustules disappear after one or two doses of a grain or two of calomel and a few grains of rhubarb, with a small blister on the temple, and bathing the eye with warm water or poppy-water. But if the pustule go on to bursting, and a little ulcer form, after two or three days, if



there be no surrounding redness, the ulcer should be touched with the point of a camel's-hair pencil dipped in a solution of lunar caustic, in the proportion of one grain to an ounce, or two large tablespoonfuls of soft water.

As, however, the eye is as valuable as it is a delicate organ, it is always best to obtain medical aid, if it can possibly be procured, and as soon after it has been attacked by disease as can be managed; for the delay of less than twelve hours may make the difference between saving an eye, and irreparable blindness.

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### MILK ABSCESSSES.

Many females, within a few weeks, or sometimes even days, after their confinement, are attacked with inflammation of the breast, in consequence of the milk then continually produced not being emptied. This may depend either on the mother, forgetful of her duty, and too anxious about her own person and of her ease, refusing to suckle her child; or from inflammation brought on by an accidental chill closing the little vessels by which the milk naturally passes from the nipple. In either case the effect is the same, the breast slowly becomes gorged with milk, and at last active inflammation is set up, which runs on to abscess, and one or more openings are formed through the skin, by which the pent-up milk, mixed with matter, is discharged.

The breast at first becomes full and uneasy; then hard and painful, and the pain is soon sharp and shooting, becoming more severe every time the draught comes into the breast. The skin inflames more or less widely, but at last generally the inflammation becomes less in extent, but more severe, and attended with great throbbing at one particular part. The skin now changes colour, protrudes, has a shining hue, and, becoming deep red or blackish, gives way, and the contents of the abscess which has been forming are discharged, and the patient is relieved from the severe pain, but a deep ugly sore is left, which generally heals very slowly, and leaves a very unsightly scar.

*Treatment.*—At the onset of this complaint, the greatest effort should be made to empty the breast, by the natural means of suckling, or by drawing the breast with a proper milking tube; and if the milk can be in this way emptied, the fulness and uneasiness usually subside. But if these means fail, it will be proper to endeavour to check the flow of milk to the breast by applying cold evaporating lotions, and giving Epsom salts in sufficient quantity, a large tea-spoonful three or four times a day, to act

very freely on the bowels, which sometimes answers the purpose and prevents further progress. Should, however, the inflammation remain unchecked by these remedies, and the swelling and redness increase, then leeches—ten or a dozen—may be applied, and repeated two or three times, followed up with bread-and-water poulticing. If matter have once formed, and when it has, it is generally accompanied with one or more fits of shivering, little if anything, can prevent it making way to the skin; and the object then is, to prevent the ugly scar produced by the destruction of the skin over the abscess. For this reason it is best, as soon as the fluid can be felt, even though deeply, beneath the skin, to have an opening made with a lancet, which, if possible, should be done by a medical man. The pain of this is indeed very severe, but it is momentary, and the relief is great within a few minutes, as the milk and matter escape immediately by the opening, and continue so doing till the wound fills up from the bottom. Those, however, who have not courage to have the abscess punctured, must bear their agony till it break, and with the almost certain prospect of a scarred breast. Generally it is only necessary to continue the application of the poultice, and to keep the bowels constantly acting with Epsom salts till the milk ceases to form; after which, in the course of a fortnight or three weeks, the wound usually heals.

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## SORE NIPPLES

Are very frequently a source of great annoyance during suckling, and not rarely is the agony so great when the nipple is pressed by the child's lips, that the fondest mother dreads every time she takes the child to her breast. The nipple is also often sore and raw, and discharges an acrid fluid which increases the soreness.

*Treatment.*—This is often very difficult, for though many applications might be made which would quickly heal the soreness, yet their taste would be so disagreeable to the child that he would not take the breast. It is better, therefore, to trust specially to frequent bathing with warm or cold water, as most agreeable to the patient's feelings, so as to prevent any collection of the acrid fluid and increase the soreness, and to dab the nipple frequently with a little cold brandy and water, or spirits of wine and water, which dull the tenderness of the part, and do not by their taste indispose the child to suck. It is also advisable that

the nipple should be protected by a shield of silver or ivory, the former being best, as it can be kept clean, covered with a cow's teat, which is easily obtained, and may be kept in a little weak spirit and water. The shield should always be sufficiently large to receive the nipple without squeezing, and to allow its swelling as the milk is drawn through it; and it should only be worn whilst the child is being suckled.

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### IRRITABLE BREAST.

Young unmarried women are often sadly troubled with tenderness and pain, and even with lumps in the breast, becoming worse at particular times. This condition not unfrequently continues for months, and is not only very harassing from the severity of the pain, but from the fear which is had of it being a cancer. Further than the annoyance, it is rarely of any consequence. It is a frequent ailment of that time of life, and often attacks first one breast and then the other, or even both at once.

It is best to have a medical opinion when the breast continues painful for a length of time, and more especially if there be any lump in it. But if it be such as here mentioned—and I have merely hinted at it on account of the frequent dread of its dangerous character—there is really no cause for alarm.

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### WHAT IS TO BE DONE IN CASES OF SUDDEN BLEEDING FROM VARIOUS CAUSES.

Bleeding may take place suddenly from overloading of the vessels with blood, or in consequence of wounds; and both may be fatal, if unchecked, although those from the latter cause are generally more quickly so than the former.

*Bleeding from overloaded vessels.*—Bleeding from the nose is very frequent in young people. Generally this is checked by the person sitting upright, bathing the nose externally with cold water, or vinegar and water, and sniffing it up the nostrils. If, however, it continue, a moderate pinch of powdered alum may be put into a couple of table-spoonfuls of water, and thrown up with a squirt; or a plug of lint dipped in this wash may be passed into the bleeding nostril, for generally it is only one side which bleeds; but care should be taken to fasten a strong thread securely round it, lest it be pushed in or slip so far back into the

nostril that it cannot be got out without much difficulty. Where there is frequent disposition to bleeding from the nostrils, it is necessary to prevent costiveness, and to take some saline purge continually, so as to keep the bowels rather relaxed.

Blood may be coughed up *from the lungs*, or vomited *from the stomach*, both of which are very serious matters, and require immediate attention.

When blood is *coughed up*, if in small quantity, it is shown to come from the lungs by its frothiness; yet if in large quantity it is not frothy, but pure bright red blood. The person should be at once put to bed, in a cold room, and kept cool. If faint, no attempt to recover him by giving wine, brandy, or other stimulants, should be made, which will only keep up the bleeding and increase the patient's danger, which is lessened by the faintness. If no medical man can be quickly obtained, but there be any one near who can either cup or bleed, the patient should be cupped on the chest, or bled from the arm, forthwith, to the amount of a pint or a pint and a half, according to his strength, which it is the object to reduce, so as to lessen the power of the heart, and thereby diminish or check the continuance of the pouring out of the blood into the lungs. Three grains of calomel may be given at once, but nothing taken except cold or iced drinks, till the medical man arrive and pursue such further treatment as the case requires.

If there be no doubt of the blood coming from the lungs, it would be very proper to give two or three grains of sugar of lead with a quarter of a grain of opium made into a pill with bread-crumbs every four or six hours.

When blood is *vomited from the stomach*, it is known by its dark colour, and by being mixed with the contents of the stomach; and it is usually preceded by weight, pain, and uneasiness in the region of the stomach.

In this case, also, the person must be put to bed, kept cool and quiet, and as the cause of the bleeding varies, often, though not always, bleeding from the arm is required or from the region of the stomach by cupping or leeches. Cold liquids, or ice, in small quantities only, may be given till the medical attendant comes to take charge of the case.

*Bleeding from wounds.*—Bleeding from a wound may in general be for a time, or even completely stopped, if the wounded part be on a bone, as for instance on the skull, or on parts of the face, where it can be pressed firmly against the bone by the finger, or by a bit of cork, or a hard pad bound tightly on with a roller. But if this do not succeed, each edge of the wound may be lifted up, carefully examined, and if any small jet of blood be seen, it

may be presumed that some little artery is wounded. The point of a tenaculum should then be dipped in as near as possible to it, and the spouting mouth drawn up sufficiently to pass a strong thread or silk round it, below the tenaculum; one end of the silk should then be passed through the other, and both ends drawn steadily till the blood cease to flow from the vessel, the mouth of which is then seen gaping open and white. Any other spouting vessel must be hooked up and tied in the same way. After which, if the bleeding cease, the wound may be brought together with plaster.

When, however, wounds happen in the limbs, and are followed by much and continued bleeding, it cannot usually be stopped by pressure on or near the wound, but requires the whole current of blood to be prevented passing through the limb. This is very easily done, and an unprofessional person can be taught with little difficulty to do it.

If the bleeding be from a wound in the arm, more especially if near the armpit, in which case nothing more can for the moment be done, a bystander should press his thumb firmly into the neck, behind the middle of the collar bone, which will stop the flow of blood through the great artery of the arm as it is first coming out of the chest. As, however, the pressure thus made soon tires the thumb, the handle of a door-key, wrapped in three or four folds of linen, may be pressed behind the middle of the collar bone, and held without fatigue for almost any length of time, till proper assistance can be obtained.

If there be very severe bleeding from a wound in the leg or thigh, especially if high up in the latter, the great artery which supplies blood to the limb may be pressed so as to prevent the flow of blood through it, by pressing with the thumb immediately below the crease of the groin. This pressure is made with less difficulty than in pressing behind the collar-bone, because the patient lying on his back, the pressure is made directly upon the groin, at right angles with the body. The door-key may be here also used, but the thumb is the most convenient.

When, however, the bleeding wound is anywhere below the middle of the upper arm, or below the middle of the thigh, a temporary contrivance may be used which will command the bleeding. It consists merely of a stout pocket-handkerchief and a piece of tough stick, which, from its mode of employment, is called a stick-tourniquet.

The handkerchief is to be passed once or twice round the limb, some distance, if possible, above the wound, and tied tightly and firmly. The stick is then pushed beneath the circular

bandage thus formed, between it and the skin, and twisted so that it screws the handkerchief tight till the blood cease to flow. The screwing should only be continued till the bleeding stop; for if the bandage and stick be strong, and the twisting be continued, the soft parts beneath may be severely and unnecessarily bruised.

Surgeons have a brass tourniquet with a bandage and a pad, the action of the pad being to press specially upon the artery; but as the situation of the vessel requires anatomical knowledge, it is not useful to an unpractised person, and the stick tourniquet, applied as directed, and screwed tight, answers the purpose exceedingly well, till proper assistance can be obtained.—*Household Surgery*.



## THE VENEREAL DISEASE.

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*History of its Appearance.*—It is generally stated that this disease first made its appearance at the siege of Naples, in the year 1493, from whence it spread over Spain, Germany, and every other part of the world, taking the name of each country through which it travelled; the English calling it the French disease, and the French naming it after some other country, until at length, by common consent, it was called the Venereal disease. It is very probable that it arises from promiscuous and impure intercourse, and, therefore, that it has existed at all ages of the world. Indeed, it is more than probable that a venereal disease of some description must have existed among the Jews, at the time of Moses, from the strict injunctions respecting impure and unclean intercourse inculcated by that lawgiver. It is a remarkable fact that it is a disease peculiar to the human species, as it cannot be communicated to the brute creation, as experiment has frequently proved.

This disease is generally considered under two heads, viz., *Gonorrhœa or Clap*, and *Syphilis or Pox*.

Gonorrhœa or clap is not, as its name implies, a discharge of true semen, but consists of a purulent discharge from the urethra, being the effect of inflammation of a specific character, attacking the extremity of that passage.

*Symptoms of Clap.*—This disease begins to make its appearance in some persons about the third or fourth day, and in others in a week or two after connexion, but the average time is from three to twelve days. About the third day, generally speaking, the orifice of the urethra begins to swell, the patient feels a certain degree of uneasiness in the parts of generation, there is a sensation of itching in the glans or nut of the male organ, and a soreness and

tingling in the course of the urethra; the lips of the orifice are, at first, drier and hotter than natural, but in a short time a white, purulent discharge makes its appearance, which, as time advances, increases in quantity. There is now great pain and scalding in passing water, in consequence of such a fluid as the urine, which is loaded with saline matter, passing over an inflamed surface; and from the inflammation of the lining membrane diminishing the size of the passage, the urine is voided in a smaller stream than natural, and sometimes with difficulty. The discharge, in the course of a few days, considerably increases and changes its appearance, being sometimes greenish and sometimes of a yellowish cast; the patient is troubled with frequent and painful erections, particularly when he gets warm in bed; this affection is called *ehordee*. In the mild form of this disease it is unaccompanied by any constitutional symptoms, and will, by strict attention to diet, rest, and cleanliness, run itself off in the course of five or six weeks without the aid of medicine.

In the severe form of the disease arising either from natural causes, intemperance, or the use of strong astringent injections, the inflammation, instead of being confined to the first inch and a half of the urethra, may extend the whole length backwards, implicating the prostate gland, neck of the bladder, and the lining membrane of that organ. In these cases, the patient is tormented with a frequent desire to pass water, which is voided with great difficulty, and only by a few drops at a time. There is great constitutional disturbance, and fever of an inflammatory character. It is also frequently accompanied by enlargement of the glands of the groin, arising from inflammation of a set of vessels called absorbents, which lead from the diseased surface in the urethra into them: these are called sympathetic buboes, in consequence of their increasing or diminishing in size, according to the amount of inflammation in the passage; they do not frequently proceed to suppuration. From the same cause, that is, extension of inflammation along the spermatic tube, there will be inflammation and enlargement of one or both testicles. In such cases, the discharge will disappear for a time, and as there may be a good deal of constitutional disturbance and fever, all stimulating medicines and astringent injections should be suspended; this affection frequently arising from their improper use. It may also be accompanied by one or more abscesses along the under surface of the urethra, which frequently communicate with that passage. *Chordee* is a most troublesome affection in this disease, and consists in the painful erection of the penis, the top being bent downwards; this arises from inflammation of the cells sur-

rounding the urethra, which prevents its extension during erection, when all the other parts of that organ are filled with blood. When the inflammation runs high, it sometimes happens that in making water, a small blood-vessel is ruptured and a flow of blood ensues, which is of great service unless it should be too copious. In persons troubled with tight foreskins, the matter from the urethra becomes collected between the foreskin and the nut of the penis, producing excoriation of the latter and inflammation and swelling of the former, so that the patient is unable to draw it back from off the nut, this state is called phymosis; on the other hand, when the foreskin becomes inflamed and swollen, and cannot be drawn over the nut so as to cover that part, it is called paraphymosis. Persons in whom the foreskin is naturally very tight, so that the nut of the penis is never exposed, are subject, when out of health, or when the bowels are confined, to a discharge from beneath the foreskin, resembling in its character the discharge which takes place in clap; this discharge arises from irritation of a set of glands surrounding the nut of the penis, which pour out a purulent secretion, and produces excoriation and inflammation of the parts. This disease is called spurious Gonorrhœa, and must be distinguished from true clap, as the treatment of the two will essentially differ.

*Treatment of Gonorrhœa or Clap.*—In the mild form of this disease, and in the first stage, when the discharge is fully developed, and the inflammation confined to the first inch and a half of the urethra, the first thing to be done is to open the bowels briskly. This may be effectually accomplished by administering the following powder:

Take of Powdered Jalap, 20 grains.  
Calomel, 4 grains.

Mix:—to be given in something thick at bedtime. Animal food, all stimulating drinks, such as porter, ale, spirits, and wine, should be carefully abstained from. Great cleanliness should be observed; the penis should be bathed several times a day in hot water, allowing it to soak for a few minutes each time, and taking care to wash off all discharge which might be collected between the foreskin and nut of the penis. The patient should rest as much as possible, and he should wear a suspensory bandage to keep the penis out of the way of all friction. His diet should consist of light farinaceous food, such as arrow-root, sago, or bread-puddings; and for his ordinary drink, barley water, or toast and water. Broths of an unstimulating character, such as mutton

or chicken, might both be allowed occasionally. He should then take the following powder three times a day :

Take of Cubebs pepper, 1 drachm,  
Powdered Gum Arabic, 1 scruple,  
Carbonate of Soda, 10 grains.

Make a powder ; to be taken in a little milk or water. This treatment should be continued for a few days, after which the doses of eubebs might be increased to two drachms three times a day. Should the discharge still continue after persevering in this plan for eight or ten days, and when the active stage of the inflammation has subsided, the following mixture may be administered with advantage :

Take of Balsam of Copaiba, 3 drachms,  
Sweet Spirit of Nitre, 4 drachms,  
Tincture of French flies, 2 drachms,  
Water, 3 drachms.

Mix. Shake up and take one teaspoonful three or four times a day, in a wineglassful of water. Or the following mixture :

Take of Balsam of Copaiba, 3 drachms,  
Powdered Gum Arabic, 2 drachms,  
Camphor mixture or common water, 6 ounces,  
Spirit of Lavender,  
Sweet Spirit of Nitre, of each  $\frac{1}{2}$  an ounce.

Mix. Rub up the copaiba with the gum arabie, first, in a mortar, then add the water by slow degrees, and when the copaiba becomes incorporated with the water, add the other materials ; a tablespoonful is to be taken three or four times a day. Should this quantity disagree with the stomach, or produce pain in the back, the dose may be diminished according to the age, strength, and peculiar circumstances of the patient. The following is also a good form of mixture :

Take of Copaiba, 3 drachms,  
Powdered Cubebs, 6 drachms,  
Laudanum, 30 drops,  
Powdered Gum Arabic, 2 drachms,  
Common Water, 6 ounces.

Mix. A tablespoonful three or four times a day. Care must be taken to keep the bowels gently open during the treatment. The following is a good aperient pill for the purpose :

Take of Compound Colocynth Pill, 1 drachm,  
Calomel, 6 grains,  
Oil of Caraway, 6 drops.

Mix, and divide into twelve pills, one or two to be taken every second or third night. It sometimes happens that the copaiba disagrees very much with the stomach, producing indigestion, and eructation of a rancid fluid into the mouth; also fever and nettle rash. In these cases it should be suspended for a time or altogether omitted. In the severe form of this disease, when the inflammation extends as far as the neck of the bladder, bleeding should be resorted to immediately. The blood may be taken from the arm of the patient, if he be of a full and stout habit, or leeches may be applied to the amount of ten or twelve along the perineum and urethra, which may be repeated, according to necessity, once or twice a week; fomentations, consisting of flannels wrung out of hot water, should be then applied, or large poultices of linseed meal, or bread and water, three or four times a day; or the patient may sit in a hip-bath once or twice, daily; strict rest in the recumbent position should be enjoined, and for the purpose of reducing fever and keeping the bowels open, the following mixture should be administered:

Take of Epsom Salts, 6 drachms,  
Tartar Emetic, 1 grain,  
Mindererus Spirit, 1 ounce,  
Syrup,  $\frac{1}{2}$  ounce,  
Camphor Mixture, 5 ounces.

Mix. Two tablespoonfuls to be taken every two or three hours. In order to allay irritation, and relieve the pain, heat, and difficulty in making water, the patient should drink freely of barley water, linseed tea, or solutions of gum in milk; some recommend the use of soothing injections in this stage; the injection should consist of warm water eight ounces, vinous solution of opium sixty drops; mix. This should be thrown into the urethra several times a day. If the patient should be troubled with a frequent desire to make water, opium, administered by the mouth or rectum, is of the greatest service. The following is a good draught in these cases:

Take of Tincture of Opium, 30 drops,  
Syrup,  $\frac{1}{4}$  ounce,  
Camphor Mixture,  $1\frac{1}{2}$  ounce.

Make a draught, to be taken once or twice in twenty-four hours, according to the intensity of the pain; or an injection, consisting of two ounces of gruel, and half a drachm of tincture of opium, may be thrown into the rectum. Stricture is frequently the result of this form of the disease. When the active stage has been reduced by the means already laid down, the discharge may

be treated by astringents, both internally and externally. The form of mixture already prescribed will answer. Astringent injections may be also employed with advantage; either of the following may be used :

Take of Sulphate of Zinc (white vitriol) 30 grains.  
 Wine of Opium,  $\frac{1}{2}$  drachm.  
 Water, 6 ounces.  
 Mix.

To be thrown into the urethra three or four times a day or

Take of Nitrate of Silver (lunar caustic), 4 grains.  
 Distilled Water, 1 ounce.

Make an injection ; this must be injected by means of a glass, or bone syringe. Some persons are in the habit of using this injection in the proportion of one grain to the drachm of distilled water, that is to say, twelve grains to one and a half ounce ; but, as sometimes good results and sometimes bad arise from this treatment, it will be the safer plan to follow the less active course, as it frequently happens that inflammation of the testicle follows the use of powerful injections.

One of the most painful and sometimes most troublesome consequences of gonorrhœa, is inflammation of the testicle. This affection, usually termed "swelled testicle," may occur at any period of the disease ; and although its occurrence may be favoured by improper treatment or mode of living, it is in most cases independent of such causes. It arises from extension of the inflammation, from the urethra, down the spermatic canals to one or both testicles, but usually attacks only one at a time. It is best to be avoided by careful attention to regular living and quiet, during the inflammatory stage of the gonorrhœa. It commences sometimes with pain in the testicle itself, and sometimes the pain is felt first in the groin, in the situation of the spermatic cord. If its approach is thus perceived, the application of numerous leeches in the *groin*, or of cupping to the loins, with rest in the recumbent posture and suspension of the scrotum in a proper bandage, will frequently prevent the extension of the inflammation to the testicle itself. Should the inflammation, however, have reached that organ, or commenced in it, the most immediate relief will be obtained by carefully surrounding the swelled testicle with narrow strips of adhesive plaster, by which means, together with perfect rest, the testicle being further supported in a bandage, and should the pain extend to the groin, the application of leeches in that situation, will usually put a stop to the disease in a few



days. As many, however, will be unable to apply the strapping in a proper manner, and as it is only applicable in the early stage of the affection, it may be as well to say that, usually the inflammation will subside spontaneously in a few days, if the patient will keep quietly lying on his back with the testicles supported in a proper bandage, and fomented either with hot water, and cool with cold water, as his feelings may dictate. The bowels should be kept open by saline purgatives, such as Epsom salts, &c., and the diet should be low. If there is much pain in the groin, flank, and back, leeches should be applied in the former situation, or cupping in the latter, and a full dose of Dover's Powder should be taken at bedtime. In extremely painful cases, great relief will be experienced by the application of a tobacco poultice to the scrotum. This may be made by mixing equal parts of shag tobacco and meal together, and moistening with hot water.

Mercury is never requisite in this affection, and leeches should never be applied to the scrotum itself. The swelling of the testicle, in most cases, leaves hard swelling on the back of the gland, which is gradually removed in process of time; but during its existence, care should be taken to keep the testicles well supported in a suspensory bandage, as relapses, under neglect of this precaution, are not unfrequent.

In phymosis, the nut of the penis frequently becomes excoriated from the irritation of the matter from the urethra, and warty excrescences grow between the nut and the foreskin. In order to prevent such effects, great cleanliness should be observed, the foreskin should be drawn back as far as possible, and the matter washed off, and warm water should be thrown under the foreskin several times a day by means of a syringe. If excoriations or warts exist, black wash will be of the greatest service; it should be used in a similar manner to the warm water. Black wash is made by mixing thirty grains of calomel with two ounces of lime-water. The bowels should be kept gently open by means of the common black draught.

*Treatment of Chordee.*—We have observed before, that chordee consists in a painful erection of the penis, produced by the non-extension of the spongy cellular body surrounding the urethra, while all the other parts of the penis are distended with blood. This want of harmony between the parts occasions the penis to be bent downwards, and also the pain which is experienced by the patient, during an erection. In order to obviate this, the penis should be rubbed with strong solutions of opium, such as the tincture, or pledgets of linen, wet with the tincture of opium, should be constantly applied, taking care to change them as often

as they become warm; or it may be rubbed with the following application, which is found of great service in this affection:—Take of extract of belladonna two drachms, camphor ten grains, rub up the camphor into a fine powder, having previously dropped on it a few drops of spirit of wine, and then add the belladonna. About the size of a small pea of this, rubbed along under the surface of the penis, and upon the frænum or bridle, quickly brings down an erection and relieves pain. All lascivious ideas should be dismissed from the mind; the bowels should be kept open by a mild aperient. As the erections generally come on more frequently when the patient becomes hot in bed, the best means of temporarily relieving it will be to bend the penis downwards with the hand, and to apply cold; but the most certain means of preventing it will be to administer at bedtime the following draught:

Take of Tincture of Opium 20 drops.  
Camphor Mixture  $1\frac{1}{2}$  ounce.  
Mix.

This draught ought to be taken at bedtime, and to be repeated in three or four hours, if not asleep or in pain. In the treatment of sympathetic buboes accompanying gonorrhœa, little will be required to be done, as they depend on the amount of inflammation in the urethra, and will increase and diminish in size according as the original disease becomes better or worse; however, as they sometimes enlarge very much, and become very painful, it may be found necessary to apply leeches once or twice a week; the patient should rest as much as possible, and pledgets of linen wetted in Goulard-water should be constantly applied. The bowels should be kept freely open. If they should not yield to this treatment, but proceed to suppuration, poultices should be constantly applied until matter is formed, when it may be evacuated by means of the lancet.

In cases of retention of urine following clap, the patient should be placed in a warm bath, and a large dose of laudanum administered. If this treatment does not succeed in relieving the bladder, the catheter should be introduced.

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## SYPHILIS, OR POX,

Is usually accompanied by three distinct characters of sores or ulcers; first, the common primary venereal sore; secondly, the phagedenic or sloughing sore; and thirdly, the true syphilitic or Hunterian chancre. The common venereal sore usually appears in

three or four days after connexion; the patient feels an itching about the tip of the penis, and upon examining it, finds either a pustule or an ulcer, situated either upon the prepuce externally or internally, at its junction with the nut, or on the nut itself, or at the orifice of the urethra, at its union with the bridle or frænum.

The form of this ulcer is generally round or circular, and is hollowed out, presenting a dirty brown, hard, lardaceous surface, which secretes a puriform matter. When this ulcer is situated on the prepuce it becomes raised, particularly at its edges; when in the fossa, or at the root of the nut of the penis it is ragged, and when on the glans, it is excavated. Its progress is first destructive, and then suppurative; and, if not interfered with, in favourable cases, usually runs its course in about twenty days, the destructive or ulcerative stage lasting about ten days, and the granulating or healing stage lasting the remaining ten. This sore is unaaccompanied by any thickening of the skin, or hardened base, in the first stage, unless interfered with by mal-treatment, dissipation, or the abuse of caustic. This sore is frequently productive of swelling and inflammation in the groin, and is accompanied by warts, and growths of an unhealthy character, situated about the thighs, purse, and lower part of the body, and between the buttocks.

*Treatment.*—In the first stage, that is, before the crust falls off, or where the ulcer is very small, the sore should be touched with lunar caustic; this frequently stops the ulcerative stage, and causes it to take on a new action by which it heals; the same application, but weaker, will be necessary, if the sore becomes indolent. During the ulcerative stage, or that stage in which the ulcer increases instead of diminishes, great attention must be paid to cleanliness; the sore should be washed three or four times a day with warm water; a piece of lint or fine linen, covered with spermaceti ointment, or wetted with black wash, should be applied to it after every washing. The bowels should be kept open, and five grains of blue pill and five grains of Plummer's pill administered night and morning, taking great care not to produce salivation. When the sore assumes an indolent character, great benefit will be derived from the application of the following wash:

Take of Lunar Caustic 5 grains.  
Distilled Water  $1\frac{1}{2}$  ounce.  
Mix.

A piece of lint or linen, wetted in this lotion, to be applied to the sore three or four times a day.

Black wash is the best application for those warts and growths which spring up about the anus and buttocks. The swelling in the groin, arising from the common venereal sore, seldom requires any treatment; but if it should prove troublesome and painful, leeches may be applied, followed by fomentations and poultices. The patient should rest as much as possible, and make use of a plain unstimulating diet.

In the treatment of phagedenic or sloughing ulcer, no specific rules can be laid down, the sores at one time requiring a stimulating and at another time a soothing method of treatment. This sore usually commences from an excoriation or a pustule, as in the case of common venereal sore, or it may follow that form of the disease. It is known by that process of extension by which its edges appear to melt away; "the action is chiefly confined to the margin which the destructive process having undermined, overlaps with an irregular and ragged edge." In this form of ulcer, the reparatory action commences as soon as the destructive is exhausted, so that the two processes advance together at opposite edges, the sore ulcerating at one part and healing at another at the same time. In the commencement the sore may be touched with nitric acid, or diluted nitric acid, upon two or three occasions, and if found not to agree, the stimulating treatment should be laid aside, and the soothing substituted. It may now be washed with warm water, and various applications tried, as it is impossible to say what form of wash will answer best; those in most repute are the black wash, yellow wash, diluted nitric acid, Peruvian balsam, and solutions of the nitrate of silver. If the patient be of a full habit, he may lose blood from the arm with advantage, and take salines and antimonials. If weak, he should live generously, and mercury should be administered with great caution.

For the treatment of true syphilitic or Hunterian chancre, mercury is the sheet anchor, and must be employed either internally or externally, or, where circumstances require it, by both means. This sore, unlike the preceding, seldom appears before a week or ten days, and is sometimes not detected for four or five weeks after connexion. It appears in the form of a red, raw, superficial ulceration, placed on a circumscribed, elevated, hardened base. This base is firm, incompressible, and inelastic, and is as hard as cartilage; it is destitute of pain and very slow in its progress. This form of the disease is generally accompanied by true bubo, that is, inflammation of one or two glands in the groin, distinct and circumscribed in their outline, and totally dissimilar to those swellings in the groin arising from gonorrhœa, or the common venereal sore.

As soon as the sore is detected, the patient should commence taking five grains of blue pill, and a quarter of a grain of opium, made into a pill, night and morning, and he may, at the same time, in order to bring the constitution as soon as possible under the influence of mercury, rub in, twice a day, along the inside of the thigh, about the size of a nut, an ointment composed of blue or mercurial ointment and camphor. The following is the formula: Rub down twenty grains of camphor on a slate, with a spatula, having previously saturated it with spirit of wine, and then mix it up with the mercurial ointment. This treatment should be continued only until the mouth and gums become slightly affected, when it should be left off for a short time. The patient should be kept under the influence of the medicine for three or four weeks, and then the decoction of sarsaparilla and the hydriodate of potash administered. Five grains of the latter in a common sized tumbler full of the former, may be taken three times a day, and continued for a month, according to circumstances. The sore in the mean time should be kept clean, and such applications employed as may happen to agree with it best; these consist of washes of nitrate of silver, black wash, and spermaceti ointment.

When the ulcer cicatrizes, or heals, and any hardness remains, mercury should be given to promote its absorption, and the skin destroyed by the direct application of the nitrate of silver.

When the disease has been neglected, or a sufficient quantity of mercury has not been given, the constitution becomes affected in a time varying from six weeks to three months, which manifests itself by producing sore throat, disease of the skin, and inflammation of the eyes. These diseases must be severally treated by the remedies already recommended. When a bubo becomes troublesome and painful, it should be well leeches, fomented and poulticed; and should it proceed to suppuration, the matter must be let out by a free incision with a lancet, as soon as fluctuation is felt. During this disease, the patient should be warmly clad, he should rest as much as possible, and live on plain unstimulating food. In the commencement, he should refrain entirely from spirits, wine, or fermented liquors; he should not expose himself to wet, damp, or the night air, and he should pay strict attention to his bowels.

# MEDICAL RESOURCES,

## OR, WHAT TO DO IN CASES OF EMERGENCY.

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UNDER this head may be appropriately included those inventions which have reference to the preservation of life from accidents by water, fire, and other agents of personal injury.

### ABRASION OF THE SKIN.

When the surface of the part is abraded or grazed, our first object should be to remove, by means of tepid water, any sand or extraneous matter from the wound; it is then to be bathed with spirit and water till the pain is somewhat abated; and, to defend the tender surface from the external air, a piece of dry lint is to be laid over it, or, what is better, lint or fine rag wetted with water, and over it a piece of oiled silk, to retain the moisture. Should there be much pain or swelling from inflammation, a poultice, or fold of linen, moistened with Goulard's lotion, may be laid over the lint. When this comes off, if the skin has not healed, it is to be dressed with any simple cerate.

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### BRUISES AND CONTUSIONS.

To relieve the pain and local stupor occasioned by slight contusion, it is advisable to bathe the parts in spirit or brandy and water. When the injury is somewhat more severe, though still slight, and not likely to be followed by inflammation, tepid water, or a lotion composed of equal parts of brandy and vinegar, may be applied.



## BURNS AND SCALDS.

The part burned or scalded is to be freely bathed with a piece of linen dipped in heated vinegar, and then covered with a liniment composed of one part of oil of turpentine and two parts of yellow basilicon. At first some smarting may be occasioned by the application, but in the course of an hour or two it gradually abates, being succeeded by a soothing sensation, and the patient feels comparatively easy; the dressing may now be changed for sugar of lead ointment, or the common liniment, composed of equal parts of lime water and oil, known by the name of carron oil. If blisters have risen, they may be opened with a needle. Should the skin have been removed, the treatment is the same, since equal relief is experienced.—(*See Domestic Surgery.*)

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## CUTS AND WOUNDS.

In a simple cut or wound all extraneous matter is to be removed. The bleeding, if it does not stop spontaneously, is to be checked by the use of cold water or astringents, such as alum, galls, or tannin, and the edges of the cut surface brought firmly into contact by strips of sticking-plaster, and, if necessary, bandaged. (*See Domestic Surgery, art. Wounds.*)

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## EPILEPSY.

During the epileptic paroxysm little or nothing is to be done, except preventing the patient from injuring himself. His clothes should be loosened, particularly about the neck, his head elevated, and a piece of wood or cork put between his teeth, to prevent injury to the tongue. Should there be considerable determination of blood to the head, or the patient be very plethoric, it may be proper, if he can be kept steady, to open a vein, or the temporal artery. In weakly constitutions, the most powerful antispasmodics might be tried in the form of an injection, as they could hardly be swallowed. An emetic, when it can be got down, will always remove the fit where it has been induced by drinking strong liquors. Care should be taken not to give the patient a cup or glass to drink from during the convulsive paroxysm, as he will be apt to bite a piece from such vessels and injure his mouth.

## SPRAINS.

In a recent sprain the first object is to prevent inflammation. This is best done by cold lotions, such as are composed of three parts of water, one part of spirits of wine, and one part of laudanum. The part also should be supported with a moderately tight bandage, and perfect rest allowed to the limb, if possible; but if the part be inflamed, then the bandage must be withdrawn, and, in place of the cold lotion mentioned above, warm water should be used. It is always proper to apply leeches, and in this case it is almost impossible to apply too many.—(*See Domestic Surgery.*)

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## SUBSTANCES IN THE EYE.

When a foreign substance lodges on the surface of the eye, the necessary consequence is pain and acute inflammation; and, if neglected, obscurity and even loss of sight. If the substance lie disengaged on the surface of the eye, it is easily removed by means of a camel-hair pencil dipped in oil, or, what is better, a piece of soft paper rolled into the size of a quill, and softened in the mouth. When the substance is fixed in the coats of the eye, a surgeon should be consulted.

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## BOAT ACCIDENTS.

If upset in a boat, or in any other way precipitated into the water, without being able to swim, draw in the breath, keep your mouth as well shut as possible, and do not throw your arms about; endeavour to hold your head up, yield yourself to the buoyant powers of the water, and stretch out your hands, but only below, not *above*, the surface. Remember, that the *less* you expose above the surface, the better are you buoyed up. Many persons are drowned merely from struggling and throwing up their hands.

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## CLOTHES CATCHING FIRE.

The moment that you see your clothes on fire, remain still and collected; do not, on any account, run away in fright. If there be a loose rug, carpet, or table cover at hand, roll it tightly about

you. If you do this smartly the flame will immediately be extinguished. Should no cloth of any kind be at hand, and no one be present to give assistance, lay yourself on the floor, and try to extinguish the flames by rolling yourself about, always taking care to keep the garments as close together as possible. By the means here pointed out, the flame will in general be stifled.

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### POISONING BY ARSENIC.

The stomach-pump, if one can immediately be had, is here most valuable. In the absence of the stomach pump, give twenty-four grains of sulphate of zinc, and promote the vomiting by copious draughts (so as to fill the stomach) of warm or cold milk, sugared water, or linseed tea. Hydrated sesquioxide of iron is the most certain antidote for poisoning with arsenic which has yet been discovered. The quantity required to neutralise the poisonous property of arsenic is at least twelve parts to one of the poison, but it should always be given in as large doses as the stomach will bear; thus, a tablespoonful may be mixed with water, and this quantity administered every five or ten minutes.

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### POISONING BY CORROSIVE SUBLIMATE.

As quickly as possible mix up the whites of a dozen eggs, or more, with two pints of cold water, and give a glassful of the mixture every two minutes, till the stomach can contain no more. When fewer eggs are at hand, use all there are, and supply the deficiency with milk. Wheat flour, mixed with water, is also good. If the stomach-pump is at hand, employ it without delay. When inflammation of the stomach and bowels comes on, apply leeches and fomentations.

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### POISONING BY OPIUM, LAUDANUM, OR MORPHINE.

If the stomach-pump be not at hand, tickle the throat with a feather. Emetics, such as twenty-four grains of sulphate of zinc, or ten grains of sulphate of copper, dissolved in a small quantity of water, may be given, and repeated if necessary. The stomach is often so torpid that vomiting cannot be produced; in such cases,

dashing cold water over the head sometimes rouses the patient, and brings on vomiting. The patient should also be dragged up and down between two men, or shaken and driven with speed over very rough roads in a cart. Pulling the hair so as to give pain; injecting water into the ears; freely scattering cowage over the neck and shoulders are also recommended (but it is a cruel practice). No lemonade, vinegar, coffee, or other liquid, should be given *till the poison is removed from the stomach*, when they may be of advantage.

*Henbane, Hemlock, Belladonna, Hellebore, Colchicum, &c.*, produce symptoms very similar to opium, and require the same mode of treatment.

*Prussic Acid* occasions nausea, vertigo, vomiting, sense of suffocation, and almost immediate death, if concentrated, or taken in larger quantity. The mere act of smelling it produces a sense of suffocation and giddiness. The essential oil of bitter almonds contains a considerable proportion of Prussic Acid, but the almonds themselves may be eaten with impunity in moderation. The treatment consists of the exhibition of ammonia, brandy, and oil of turpentine, in small doses, conjoined with the affusion of a stream of cold water on the head and down the spine, and artificial respiration, if required.

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### POISONING BY OXALIC ACID.

Oxalic Acid acts with such dreadful rapidity, that the remedies must be immediate, or they become ineffectual. Carefully avoid giving water to drink to promote vomiting, for, by thus diluting the acid, it is rendered easier to be carried into the blood. The chief antidote is magnesia (not calcined), or chalk, or the mortar or plaster taken from a wall, mixed thick in cold water, and swallowed copiously. Any one of these combines with the acid, and forms an insoluble compound. Solution of soap, or soda, or potash, must not be given. After giving any of these antidotes, twenty-four grains of sulphate of zinc may be taken.

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### POISONING BY OIL OF VITRIOL.

Help in such cases, to be efficacious, must be immediate. The instant that such a substance is swallowed we must gorge the patient with magnesia suspended in water—it should be calcined

or pure magnesia, as the common or carbonate of magnesia produces great inconvenience from the carbonic acid gas it generates—this is the best known remedy. If, however, magnesia be not at hand, dissolve half an ounce of soap in a pint of water. When neither magnesia nor soap are to be had, give chalk or whiting, or beat down the plaster of a room and make it into a thin paste with water, and let it be instantly swallowed.

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### POISONING BY COPPER.

This poison is seldom taken intentionally for the destruction of life, but is sometimes conveyed into the stomach accidentally, through inattention to cleanliness in copper culinary utensils, which are acted upon by grease, acids, &c. When it is suspected, whites of eggs, as ordered for corrosive sublimate, should be given.

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### POISONING BY LEAD.

It is best to give immediately a large dose of Epsom or Glauber salts, or of plaster of Paris, mixed with the hardest pump water that can be procured; any of which will decompose the poison, and form sulphate of lead. Phosphate of soda is also an excellent antidote. If the patient do not vomit it will be proper to use the stomach-pump, or to give an emetic of twenty-four grains of sulphate of zinc. When persons sleep in fresh-painted rooms, or are much exposed to the fumes of lead, it frequently brings on distressing colic—termed the lead or painter's colic—with dryness in the mouth, vomiting, costiveness, numbness, or palsy in the limbs. The best treatment is to take a smart dose of Epsom salts, followed in an hour by thirty or forty drops of laudanum, and repeating these two medicines if necessary. "I have never," says Dr. Christison, "seen the second dose fail to remove the colic."

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### POISONOUS MUSHROOMS.

The stomach and bowels should be first cleared by giving five grains of tartar emetic, followed by frequent doses of Glauber or Epsom salts. If, after the poison is evacuated, inflammatory symptoms manifest themselves, medical aid is required. It is

difficult to discriminate between wholesome and poisonous mushrooms. The following has been given as the *general* distinguishing criteria of the poisonous :—They grow in wet shady places; have a nauseous odour; are softer, more open and porous; have a dirty-looking surface, sometimes a gaudy colour or very many distinct hues, particularly if they have been covered with an envelope; they have soft bulbous stalks, grow rapidly, and corrupt very quickly. But it would appear that the same species is, under some circumstances, edible, under others, deleterious. “So strongly,” says Dr. Lindley, “did the late Professor Richard feel the prudence of this, that although no one was better acquainted with the distinction of fungi, he would never eat any except such as had been raised in gardens on mushroom beds.”

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### POISONING BY MUSSELS AND OTHER FISH.

The fish which produce the effects of poisoning—the causes of which are quite unknown—are the mussel, the oyster, the crab, the herring, the mackerel, the salmon, the trout, and the eel. Similar effects have occurred from eating diseased beef, rancid or rusty bacon.

*Effects.*—In a few hours, and sometimes not for nearly a day, after eating the fish or meat, the patient is seized with irregular chills, acute pain in the stomach or head, restlessness, great thirst, redness and swelling of the face and eyelids, distressing itching, and red or puffy blotches all over the body, like severe nettle rash, convulsions, and sometimes death in from three hours to three days.

*Treatment.*—If the symptoms appear within an hour or two, an emetic should be given; if longer time has elapsed, a strong purge of Epsom salts, and much lemonade should be drunk. Medical aid is required.

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### ANIMAL POISONS.

*Spanish Flies.*—No antidote is known for Spanish Flies; the only method of relieving the patient is to apply the stomach-pump, give mucilaginous draughts, and treat the case as if it were one of inflammation of the stomach. Oil should be carefully avoided, it being the best solvent of cantharidin, and consequently rendering this substance more injurious.



## RABIES—HYDROPHOBIA.\*

The animals subject to the spontaneous occurrence of this disease, are the dog, the cat, the fox, and the wolf. It occurs most frequently in the dog, but the bite of the rabid cat is said to produce the disease with more certainty and rapidity than that of the dog. There is no evidence of the disease having occurred spontaneously in man, or of its being communicated by the herbivorous animals, as the horse, the ox, the sheep, &c. The inoculation usually occurs by means of the teeth penetrating the cuticle, and carrying with them the saliva or morbid matter, which gives rise to the disease. Of the number of persons bitten by a rabid animal, Professor Colles states, that not more than one in fifteen will receive the disease. This may be in part owing to the tooth in many instances passing through some part of the clothing, by means of which the virus is wiped off. The period of attack after the poison is introduced, is generally from thirty to sixty days. Mr. Taylor gives twenty-one days as the shortest period known in the human subject—in the dog or the cat it is said to be developed earlier. In some rare instances in the human subject, it has occurred after a lapse of twelve or even eighteen months.

*Symptoms in Man.*—It generally happens that the wound heals without much difficulty, and there is no trace of local or general irritation during the period which intervenes between the introduction of the poison and the occurrence of the disease.—Among the first symptoms is frequently an irritable condition of the wound—a feeling of coldness, numbness or stiffness of the cicatrix, extending to the trunk, if the wound be in an extremity. There is generally some headache, and much increased sensibility. The patient is much disturbed by strong odours or bright light—is irritable, and disposed to shrink from observation, and is often suspicious of those about him. After these symptoms have continued for a time, varying from a few hours to several days, he becomes sensible of a stiffness or stricture about the throat, and in attempting to swallow finds great difficulty, especially with liquids. From this time the sight or sound of fluids is very disturbing to him, and often produces violent spasms. The breathing is hurried. There is great thirst, with inability to drink, and an increase of thick, viscid saliva. It is scarcely necessary to trace this dreadful malady through all its progress. The symptoms go on increasing in intensity until the patient dies either

\* This article and the one following, are quoted from a treatise on Poisons and their Antidotes, by O. H. Costill, M.D., Philadelphia.

during a spasm, or in a state of exhaustion from frequent spasmodic attacks. The pulse is rather excited—strong at first, but becomes weak as the disease advances. The mind frequently remains clear to the last—death generally takes place in from two to five days.

*Post-mortem Appearances.*—The epiglottis, larynx, pharynx, and cardiac orifice of the stomach, have been found inflamed. The brain and spinal marrow have not generally been found in a diseased condition.

*Treatment.*—Blood-letting, emetics, narcotics, stimulants, counter-irritants and counter-poisons have all hitherto failed to cure this dreadful disease. The numerous substances which have been recommended as antidotes, and have been popular for a time, have also, upon repeated trials, been found ineffectual. Happily, however, the disease, which resists the most powerful therapeutic agents when fully developed, may be *prevented* by a very simple prophylactic treatment, and it is to this we must mainly look for the safety of those who are so unfortunate as to be exposed to the danger of its attack. This treatment consists in the complete excision of the bitten part, and the removal thereby of the poison before the absorbents have carried it into the circulation. This course is recommended by all modern writers on the subject, and the strongest testimony adduced in its favour. “Professor Colles states, that three persons were bitten by the same dog at the same time—two of them suffered the part to be cut out, and they escaped; the third refused to submit to the operation, had hydrophobia, and died.”—*Taylor on Poisons*, p. 458. This plan has been found effectual after several days have elapsed, and should be tried even after a much longer time, as it seems evident from the long period of incubation that absorption goes on very slowly. Even when the disease is about to be developed, and the wound becomes irritable; as has been above stated, it may not be too late, though, of course, the earlier it is performed the greater will be the probability of success. The wound should be carefully washed, and allowed to bleed freely—the whole of the bitten part should then be excised, and a stick of lunar caustic afterwards rubbed over the whole of the cut surface—after which, a simple dressing only is required. If, from the extent of the laceration, the structure of the parts, or other causes, the knife cannot be freely used, the wound should be washed for a long time, a cupping-glass applied, and subsequently the surface freely cauterized.

Mr. Youatt, who has had much experience in these cases, and has himself been several times bitten by rabid animals, places entire confidence in the use of lunar caustic—which, he says, he

has never known to fail in preventing the occurrence of the disease when properly applied. He advises that the part be first well washed, and the caustic subsequently applied into the very depths of the wound. Where it is necessary to enlarge the wound for the purpose of applying the caustic, he very properly directs that the knife be wiped after each incision, in order to prevent the virus being carried into the fresh cut. When lunar caustic is not at hand, the actual cautery (hot iron) may be used in its stead.—*Youatt on the Dog*, p. 237.

*Symptoms of Rabies in the Dog*.—"In the first stage of the disease the animal appears sick, dull, and peevish, but becomes playful at intervals. He does not appear to know those to whom he has been most attached, and his habits are completely altered. He snaps at the air as at insects, drinks his own urine, and swallows dirt, straw, and all articles within his reach. He roams about, running in an irregular manner, with his back arched, and his tail drooping, though not drawn beneath the body. He runs or swims through water without difficulty. In his progress he avoids other dogs, not going out of his way to bite them; although he will snap at them if they come near him. It is a remarkable fact that all other dogs avoid him. The voice is altered, the bark is between an ordinary bark and a howl, and ends with a short, peculiar howl. The animal does not refuse to drink water even to the last, nor does he froth at the mouth as is supposed."—*Taylor on Poisons*, p. 459. It is a remarkable fact that the symptom which characterizes the disease in the human species is not present in the inferior animals. Mr. Youatt, who has seen much of the disease, never witnessed the dread of water in them. As there are other diseases to which the dog is subject, which resemble rabies in their commencement, it is proper, in doubtful cases, to have the dog secured until the nature of the disease is ascertained, particularly if he should have bitten any one.

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### VENOMOUS SERPENTS.

Naturalists enumerate more than fifty species of venomous serpents. Most of these are found in India and Southern Europe—the Cobra di Capello is the most formidable.

The viper (*vipera berus*) is a native of more northern countries, and is found frequently in England and Scotland. The bite of this animal is seldom fatal to man, or the larger animals, owing, probably, to the small quantity of poison secreted. The sac or

poison reservoir of the viper is said not to contain more than one grain and a half of the poison. It is consequently soon exhausted, and when the animal has bitten several times in quick succession, it becomes innoxious. It is most venomous in the hot season. There are some cases recorded in which death was produced in the human subject by the bite of the viper.

The *Crotalus Horridus*, or Rattlesnake, is the most venomous serpent known in this country. Its bite frequently occasions death in a very short time.

The gland which secretes the poison in this and other venomous serpents is situated immediately behind each eye. This gland communicates with a receptacle or sac, which expands anteriorly, and receives the base of the tooth or poison-fang. The tooth is of a curved form, and is perforated by a fine canal, which emits the poison into the wound made by the tooth.

*Symptoms.*—"When the poison is very active the effects on the system are so sudden and violent that death soon takes place. When it is less intense the shock to the general system does not prove fatal. It brings on a slight degree of delirium, and the pain in the bitten part is very severe. In about half an hour swelling takes place from the effusion of serum in the cellular membrane, which continues to increase, with greater or less rapidity, for about twelve hours—extending during that period into the neighbourhood of the bite. The blood ceases to flow in the smaller vessels of the swollen parts; the skin over them becomes quite cold; the action of the heart is so weak that the pulse is scarcely perceptible, and the stomach is so irritable that nothing is retained on it. In about sixty hours these symptoms go off; inflammation and suppuration take place in the injured parts, and when the abscess formed is very great, it proves fatal; when the bite has been on the finger, that part has immediately mortified. When death takes place under such circumstances, the absorbent vessels and their glands have undergone no effects similar to morbid poisons, nor has any part lost its natural appearance, except those immediately connected with the abscess. In those patients who recover, the symptoms go off more readily and more completely than those produced by a morbid poison which has been received into the circulation."—*Sir E. Home, Phil. Trans.*, for 1810.

Dr. Wagner observes, in regard to the bite of the viper, that danger need not be apprehended except when the bite is inflicted on small organs, such as the fingers or toes, because large parts cannot be fully included between the animal's jaws and fairly pierced by

its fangs, but only scratched.—*Christison*, p. 550. May not this be true in regard to the rattlesnake?

*Treatment*.—The many antidotes formerly recommended for this poison have sunk into disrepute. "A ligature should be placed immediately between the bitten part and the heart, or a cupping-glass used to prevent absorption. The wound should be enlarged and well washed. If absorption have taken place, and the skin is swollen, the whole of the skin may be bathed with oil, and attention must be paid to the constitutional symptoms. Brandy and ammonia may be given to prevent depression. Strong acetic acid, which coagulates the poison, may be applied if the person is seen soon after the accident."—(*Taylor on Poisons*, p. 462.)

Dr. Beck recommends that "a ligature be applied above the bitten part, but not too tight or too long continued. Then cauterize the wound with a hot iron or lunar caustic, and afterwards apply compresses to the part. Perspiration and sleep should be encouraged by small doses of ammonia, Madeira wine, and ether, and the patient should be kept in bed, well covered. Gangrene is to be combated by antiseptics."—(*Orfila's Elements*, p. 462.)

Dr. Beck refers to a case of cure by ligature, mentioned in the Eclectic Repertory, vol. iv., p. 38, and also to a communication from Dr. Holbrook, of Cayuga County, N. Y., in which it is stated that "several persons bitten by snakes were remarkably and speedily relieved by the free administration of Peruvian bark in milk."—(*Elements*, p. 462.)

The bee, the humble-bee, the wasp, and the hornet, occasion much local irritation by their sting, and have sometimes produced alarming and dangerous symptoms, such as vomiting, fainting, and great difficulty of breathing; even death has resulted from the poison infused by a large number of honey-bees.

*Treatment*.—Oil and the alkalies are very useful as local applications to relieve pain. Anodyne emollients may also be used. The sting should be extracted if possible; and if general depression exists, the volatile alkali should be given.—(*Costill on Poisons*.)

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## RECOVERY FROM NOXIOUS VAPOURS.

The patient should be freely exposed to the open air, and if he can swallow, acidulated liquids should be given him. If he be insensible, cold water should be dashed on his face and head, strong vinegar, and especially aromatic vinegar, be rubbed about his nostrils, and held under them; and stimulating elysters be in-



jected, as recommended for drowning. The lungs should be inflated with the warm breath of a healthy man, or, what is better, with oxygen gas.

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## THE MEANS OF FUMIGATING INFECTED CHAMBERS, ETC.,

### AND PREVENTING THE PROGRESS OF CONTAGIOUS DISEASES.

*The Nitrous Fumigation.*—The efficacy of nitric acid in the form of gas, in arresting contagion, was first established by Dr. Carmichael Smyth, in the year 1782, at Winchester, where he was sent by government, in consequence of a malignant fever of the most formidable nature raging there, which had carried off a great number of the officers and servants of the prison, also from two to three hundred of the prisoners. Since the above period, it has been extensively used in Newgate, in hospitals, and on board ships, with the same good effects as described by Dr. C. Smyth, who was rewarded by government with 5,000*l.*, and appointed physician to the king. The gas or vapour is obtained by pouring one ounce of sulphuric acid upon two ounces of the nitrate of potash in a large tea-cup placed in a basin containing hot water; the gas required will be immediately disengaged.

This quantity will be sufficient for a small apartment, and may be used in a sick-room, provided it be placed at some distance from the patient. If the room be large, two cups should be used, and if intended to fumigate a whole house, several should be placed in various parts, closing the doors and windows for half an hour. Sir. William Burnett has lately obtained the most successful results in arresting contagion by the use of a solution of the chloride of zinc, which in a few minutes will clear any apartment, however offensive.

*Directions for the Use of the Chloride of Lime.*—To a pound of the chloride of lime add four gallons of water: stir the mixture well, and, after allowing it to settle for a short time, pour off the clear solution, and keep it in well-corked bottles.

*Fumigations with the Chlorides.*—The chlorides of lime and soda are the most powerful disinfecting agents hitherto discovered, almost instantaneously destroying every bad smell, and all effluvia arising from animal and vegetable decomposition, and effectually preventing their deleterious influence.

In large towns and cities suffering from infectious or contagious disorders, it is strongly recommended to sprinkle the rooms,



morning and evening, with the mixture; and to place some of it in shallow dishes or basins, in the different rooms, particularly the bed-rooms.

In typhus or putrid fevers, infectious complaints, &c., the mixture should be sprinkled about the room and bed-linen occasionally, the usual precaution for renewing the air of the room being equally attended to: a wine-glassful added to the water of a night-chair or bed-pan will prevent any smell.

The bed and other linen should be immersed, about five or six minutes, in the diluted liquid, before being sent to be washed, as mere washing in the common way will not always remove the infection from the linen. When used in this manner, the linen should be immediately afterwards rinsed in fresh water, as it might be injured if allowed to dry after immersion in the mixture.

The effluvia from drains, sewers, cesspools, &c., will be destroyed, by pouring into them a quart of the mixture, added to a pailful of water, and repeating the operation until the smell ceases.

Meat sprinkled with, or immersed in, the mixture for an instant, and then suspended in the air, will keep for some time without the slightest taint, and no flies will attack it.

Tainted meat, fish, game, &c., may be rendered sweet by sprinkling them with the mixture.

Water in cisterns may be purified, and all the animalculæ destroyed, by putting into it a small quantity of the pure liquid,—say about one pint to one hundred gallons of water.

Bugs may be destroyed by well washing the joints of bedsteads and all crevices, with the *pure liquid*.

It destroys the noxious effluvia of paints so effectually, that a room painted in the day may be slept in at night, if sprinkled some hours before with the mixture, and if some be allowed to remain in shallow vessels.

Stables and slaughter-houses may be purified by the same process.

*Directions for the Use of the Chloride of Soda.*—This preparation will retain its properties for a considerable time, if kept from the light, in a glass bottle, well stopped; and when used, it must be mixed in the proportion of one ounce, or two large spoonfuls, to each pint of water.

The use of this mixture is regulated by precisely the same rules as are given for that prepared with the chloride of lime. It has been most successfully applied in the following cases, viz.—

carbuncles, hospital gangrenes, gangrenous sores, ill-conditioned ulcers, ulcerated sore throats, and fœtid discharges of every description. The proportions to be used, vary according to the state of the disease. Frequent repetitions of a weak solution are more effectual than the stronger mixtures. This preparation is also applicable to the diseases of horses of a similar nature, which may be cured by the same means.

# INQUIRIES CONCERNING THE SICK-ROOM,

ETC., ETC.\*

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## SECTION I.

CHOICE AND FURNISHING OF THE SICK-ROOM, WHEN THE DISEASE IS LIKELY TO BE PROTRACTED, OR IS OF A PECULIAR DESCRIPTION:—VENTILATION, TEMPERATURE, CLEANLINESS, AND DARKENING OF THE APARTMENT. QUALIFICATIONS TO BE LOOKED FOR IN THE CHOICE OF A NURSE.

IN every case of disease, however slight its nature, the sleeping apartment of the sick should be airy and well ventilated; but, when Providence visits any member of a family with disease of a serious and protracted description, all other considerations giving way to the necessity of the case, an apartment should be chosen and arranged in a special manner for the reception of the invalid. It should be one calculated to administer to his temporary comfort, as well as to aid his recovery. It is not time, when the alarm is sounded and the danger is already urgent, to think of such arrangements; forethought must be put in requisition; every want anticipated; and whatever is likely to be required should not only be provided, but so arranged that it can be instantly found when it is needed.

The sick-room should be large, lofty, and, if possible, with a northern aspect, in order to avoid the heat of the mid-day or the afternoon sun: the windows should be capable of being opened by drawing down the uppermost sash; an advantage, however, which cannot always be obtained, as this mode of opening windows is too generally neglected in the construction of modern houses. No room, however large, should be used as a sick-room, unless it has a chimney; but neither the chimney-board nor the soot-board of the apartment should be put up, even in summer. No article of

\* Thompson, On the Management of the Sick-Room.

unnecessary furniture should be permitted to remain in the room; and that which is left in it should be of a description fitted to administer to the convenience of the invalid.

Two tables are sufficient. One of them may be small, to stand near the bed, for the immediate use of the patient: namely, to hold his jug of barley-water, or toast-water, or other beverage;—a small tea-pot, or, what is preferable, a half-covered cup with a spout, to enable fluids to be administered without raising the sufferer in bed;—his medicines for the day;—a minim measure;\*—(see page 15), and any other thing which he may frequently require.

The minim measure is requisite, owing to a drop being an indefinite quantity, and modified by the form and thickness of the lip of the bottle from which it is dropped. Medicines, on that account, are now seldom prescribed to be taken in drops.

The other table should be large, for the accommodation of medicines not in immediate use, and also for spare glasses, jugs, cups, spoons, both large and small, and other necessary articles, among which should be a graduated basin for ascertaining the quantity of blood ordered to be abstracted in bleeding; and a large bottle of filtered water. This table should have one drawer, at least, which ought to be furnished with the following articles: broad tape, such as is required in bloodletting, and also some narrow tape; two or three half-worn ribands; a bundle of old, soft linen; a sponge; a few ounces of lint; scissors, large and small; a bone spatula for spreading ointment; a couple of rolls of muslin and the same quantity of flannel bandage two inches broad; a pin-cushion well supplied with pins; needles and thread; and about half a yard of simple adhesive plaster.

Every medical practitioner has daily to lament that implements for bleeding are never at hand when they are required: he has sometimes to wait until the whole house is run over, and every drawer ransacked, to procure tape, or ribands, and pledgets; often, indeed, until the servant is despatched to purchase them at the nearest haberdasher's shop. His time is thus unnecessarily encroached upon; and the patient is injured by the irritability of temper which the delay occasions.

A sofa, if the apartment be sufficiently large to admit of it, is a very important piece of furniture in the sick-room; the erect or the sitting posture being injurious in many diseases; and, when the sick-bed requires to be made, a sofa affords the means of re-

\* These measures are sold in every druggist's shop.

moving the patient from the bed with as little inconvenience to him as possible.

If there is not space for a sofa, there should be an invalid or reclining chair; and, when circumstances will permit, it should be of that kind which is susceptible of a variety of changes, so as to vary, at pleasure, the position of the patient. There should not be more than two other chairs in the room. If there is a looking-glass in the apartment, in a situation which admits of the patient seeing himself in it as he lies in bed, its place should be changed, or it should be altogether removed from the room. A chest of drawers is essential; but none of the drawers should be appropriated for the reception of dirty linen, which ought never to be allowed to remain a moment in the sick-room. One drawer should be specially allotted for towels, of which an ample supply is, in every case, necessary. The washing-stand will require two additional basins; an additional water bottle and a tumbler; and a large, supernumerary water jug, under the table, always full of water.

There should be no kettle, nor any implement of cooking, in the sick-room; even in winter, and when a fire is required. In general, a fire in the sick-room is only necessary for the comfort of the attendants; but nurses too frequently take advantage of it to boil the water for their own tea, and to prepare the slops for the invalid; a custom which cannot be too severely reprobated. The lamp termed a *Night-nurse*, consisting of a water-bath placed over a lamp in a wire-worked cylinder; a small tin kettle which enters the top of the cylinder; and a covered earthen-ware vessel which fits it into the water-bath; are useful for keeping fluids warm, and at the same time for preserving a light in the room, when an unshaded lamp or a candle would be hurtful.

A carpet, which covers the whole of the floor, has often been regarded as a disadvantage in a sick-room; but, in general, it is an advantage; as it prevents the floor from being wetted in cleaning the room; which, in many cases of disease, is extremely injurious; whilst a carpet can be regularly cleaned by sprinkling moist tea-leaves over it before it is swept. When the room is not wholly carpeted, the boards of the floor should be swept;—never washed. An invalid may as well sleep in a swamp, as in a room the floor of which is frequently washed. The slow evaporation from the boards operates in the same manner upon the surface of the body as exposure to damp or to foggy weather; and is productive of rheumatism.

In continued fevers, the sense of hearing is often so morbidly acute, that ordinary sounds become causes of pain. In this case,

if the floor of the sick-room be not wholly carpeted, every precaution to lessen the intensity of sound should be taken. One of the most effectual is to have a couple or more pairs of large list-shoes outside the door, into which the feet, even of the doctors, may be advantageously thrust, when their shoes make a creaking noise, or when a visiter, or nurse treads with a heavy foot. On the same account, when more than one nurse or attendant is required to be in the room at the same time, no conversation, although it may be carried on in a whisper, should be permitted. Whispering; indeed, is apt to excite delirium, and to augment it when it is already present.

The French beds, without curtains, are those best adapted for the sick-room. When four-posted bedsteads, surrounded by curtains, were more in use than at the present time, the mischief arising from excluding the free air, by drawing the curtains close around the bed, was frequent and serious. In every case of disease, indeed, especially when it is attended by fever, the patient should be kept cool, and the most perfect freedom be given to the breathing: the mattress should be placed over the feather bed, and the pillows be firm and elastic. The Marseilles coverlets, which are spread upon beds during the day, and often retained at night, are heavy, and calculated rather to increase than to subdue fever: consequently they should be wholly discarded from the sick-bed. Indeed when the disease is fever, and when it is accompanied with great restlessness owing to the evening exacerbation, if the bed-room be sufficiently large, two beds should be placed in it; or if two adjoining bed-chambers can be obtained, a bed ought to be put in each, so that the patient can be moved from one bed to the other every morning and evening. This both aids sleep, and it also tends greatly to insure the personal cleanliness of the patient. The bed-clothes of the bed from which the patient is moved should, on his removal, be immediately turned down and fully exposed to the air; a precaution which will set aside the necessity of so frequent a change of linen, as would be, otherwise, required. When there is only one bed, and when the disease is fever (unless the patient is too ill to permit his being moved), the sheets which have been used at night should be replaced by others in the morning, and hung up in the free air during the day, to be again used at night. But, when it can conveniently be done, in every case of continued fever, especially of an infectious kind, the sheets should be changed once in twenty-four hours; a practice which is likely to prevent the fumes of infection from being communicated to the blankets, or to any of the furniture of the room.



In cases where the water-bed\* is required, the nurse should be aware of its tendency to sink under the pressure of the head and shoulders, and to throw the feet upwards. This is one of the disadvantages of these beds, which may be counteracted, however, by the use of an air-pillow, or some other means fitted to support the shoulders.

*Ventilation* is always of primary importance; and that period, happily, is gone by, in which air was carefully excluded from the chambers of the sick, even when they were suffering under febrile diseases. I recollect, when a student at Edinburgh, the custom of almost hermetically sealing the chambers of patients in fever was so prevalent among the lower classes of society, and even, in some instances, among the middling classes, that Dr. James Gregory used to mention, in his lectures, that as no argument was of avail in procuring the admission of fresh air into the sick-rooms of the poor, he generally pushed his cane through the panes of the windows. This, however, was not always adequate to insure the intended effect, as he often found the broken panes pasted over with paper on his next visit. Nothing can demonstrate so strikingly the importance of ventilation to the sick as the benefit which has often resulted from the simple act of removing poor patients from their own houses to hospitals, arising chiefly from their exposure to the open air.

Ventilation is particularly demanded in those fevers in which miliary eruptions display themselves; under no circumstances is it so essential as in febrile diseases of an *infectious* kind.† It may, however, be consolatory to those whose duty it is to attend such cases, to know that infection, communicated through the air,‡ rarely extends above a few feet from the body of the patient; and even in the most malignant diseases, with the exception of confluent small pox, and malignant scarlet fever of the worst

\* The Water-bed is a strong wooden trough, upwards of six feet long, three feet broad, and twenty inches deep. A caoutchouc cloth is so affixed within the trough that, when water is introduced beneath it, a bed is formed, which, from the nature of the fluid, accommodates itself to every position and movement of a patient lying upon it. (For a full account of this, see Arnott's Physics.)

† The diseases usually regarded as infectious, are typhus fever, plague, childbed (puerperal) fever, influenza, whooping-cough, consumption in its latter stages, small pox, chicken pox, measles, scarlet fever, erysipelas.

‡ The term "through the air" is used to distinguish *infectious* from *contagious* diseases. The latter, which are communicated only by contact and by inoculation, are itch, sivvens, venereal diseases, yaws, hydrophobia, ringworm of the head, and Egyptian ophthalmia.

kind, its influence does not exceed a few yards, if the room be well-ventilated. On the contrary, if ventilation be neglected, the power of infection becomes greatly augmented from its concentration in confined and quiescent air; it even settles upon the clothes of the attendants, and on the furniture of the room; and these imbibe it most readily when their texture is wool, fur, or cotton, or any loose or downy substance capable of receiving and readily retaining the air. Smooth and polished surfaces do not easily receive or retain infectious matter; consequently the nurses and attendants, in cases of infectious diseases, should have glazed gowns, and aprons of oiled silk.

In no infectious diseases are these rules more essentially necessary than in small pox and scarlet fever. It is well known that, if the bedclothes of a patient labouring under either scarlet fever or small pox be closely folded up, they will retain the infectious matter, and communicate the disease at a great distance of time; but the influence of free ventilation is so great, that medical practitioners who are attending small pox patients, and who go from them into the open air, do not spread the disease. Indeed, all infection is weakened by dilution with air. The danger of infection is augmented, if, along with bad ventilation, the atmosphere of the room be moist from any cause.

It is further consolatory to know that the infectious matter, even of the most virulent description, is not poisonous to every one who is placed within the sphere of its influence. A predisposition of the body to receive the infection must exist before it can be communicated; a condition which is augmented by fatigue and watching, defective nourishment, mental depression, or anything which can lower the vital powers. The necessity, therefore, of maintaining these powers by attention to rest, a sufficient quantity of good and generous diet, and cheerfulness of mind, need not be insisted upon.

In every case of infectious disease, the attendants, even in the best ventilated rooms, should stand on the windward, or on that side of the sick-bed from which the current of air comes; as, by neglect of this rule, and by standing in the current which has passed over the patient, the infectious exhalations are blown upon them in a direct stream from the body of the patient. The attendants should never lean over the sick, nor should they receive their breath. The health also of the nurses should always be supported by nutritious and generous diet; but not by brandy, nor any other ardent spirit.

The term infection, in its most extensive signification, implies some deleterious matter, originating from any source, and trans-

mitted through the air, which is capable of causing diseases in the human body. When this matter is emanated from the diseased bodies of men, the term is frequently regarded as synonymous with *contagion*; but, in strictness of language, the latter refers only to the communication of disease by *contact*. Whatever may be the matter of infection, it may enter the body through the medium of the lungs, which is the most ready inlet, or by the saliva, or even through the surface, if the skin be abraded, or if any ulceration be present. The influence of infectious matter is evidently exerted on the nervous system, displaying itself by debility, inertness, dislike to motion, great susceptibility of cold, irritability and despondency of mind, and by the production of a disease similar to that of the person from whom the infectious matter has proceeded. The infection may be supposed to have taken effect, and to have produced the actual disease, when the person who has been exposed to its influence is attacked with giddiness, pain of the head, irregular heat and chills, nausea, and, if the infectious disease be small pox, convulsions. These symptoms are sufficient to denote the necessity for immediate medical advice.

With the view of preventing such results, not only is it necessary to dilute the atmosphere of the room with pure air, but also to destroy the virulence of the infecting matter by chemical agents or fumigations. It is unnecessary to give any account of the numerous substances which have, at different periods, been used for this purpose; but merely to mention that the most efficient of them, and that one which is most commonly employed, is chlorine, either simply diluted with atmospherical air, or mixed with air and moisture. The mode of extricating and employing it has been described under the head of Fumigations. I may add here, that the substance most commonly employed as a disinfecting agent—namely, vinegar—is of very little value; and that pastiles, camphor, and other odorous matters, are worse than useless. I think I am authorized also in affirming that no fumigating or disinfecting agent is equivalent to cleanliness, frequent changes of the sheets and linen of the patient, and free ventilation, for checking the propagation of infection.

Next to ventilation nothing is of more importance than the regulation of the *temperature* of the sick-room, avoiding both extremes of elevation or of depression; but much depends on the nature of the disease.

The best general temperature of a sick-room is 60° (Faht.), or that of summer in this climate; and it is preferable to regulate this rather by the thermometer than by the sensations of the

patient or the attendants. Under some circumstances, however, the feelings of the patient, and his susceptibility of impressions upon the skin, should not be overlooked. Thus if the temperature be a little above that of summer, and the patient, nevertheless, feel chilly, it should be raised five or six degrees. This chilliness is very apt to be felt in a dyspeptic state of the habit, and more especially when it is accompanied with hypochondriasis. It differs from that more severe but transient coldness which accompanies intermittent fevers, and some other periodical affections; and it requires only an elevated temperature of the air for its removal, whilst the cold stage of intermittent diseases is best relieved by the warm bath, either general or local.

So important is the regulation of temperature, especially in fevers, that it often does more good than any other remedial measure. I have seen patients labouring under high delirium in a close, ill-ventilated room, become rapidly quite collected by merely lowering the heat of the apartment twelve or fifteen degrees. On the contrary, even a moderate depression of the usual temperature of the sick-room, in pulmonary diseases, will excite coughing, and augment the severity of all the symptoms.

In convalescence, as the air of the sick-chamber should be frequently renewed, the temperature in spring and autumn ought to be maintained as near as possible at  $55^{\circ}$  to  $60^{\circ}$  Fahr.; and it should be very gradually lowered as the invalid acquires strength, so as to enable him to bear with impunity the varying temperature of these seasons in the open air. Even then, if the previous disease has been pulmonary, the air admitted to the lungs should be tempered by the use of the Respirator,\* or a muslin handkerchief tied around the mouth. When the invalid first ventures out of doors, nothing, indeed, is so essential, in a prophylactic point of view, as avoiding extremes and sudden transitions of temperature.

In regulating both the admission of air into the apartments, and the temperature of the bed-rooms of the sick, in particular of those susceptible of pulmonary diseases, much caution is requisite not to overheat, nor to keep too dry, the air of the room. Great dryness of the atmosphere augments the irritability of the mucous

\* The Respirator is an apparatus consisting of a frame in which is extended a tissue of silver wire gauze, through which the air passes before it enters the mouth, over which the Respirator is fixed. The air is thus warmed before gaining admission to the lungs; the wire gauze communicating to the inspired air the heat which it receives from the expired air. A muslin handkerchief operates nearly in the same manner.

membrane, and excites coughing; hence, when the invalid-room in winter is shut up, means should be taken, occasionally, to diffuse the vapour of warm water through the room. The ordinary vase for preserving water boiling on the tea-table is admirably adapted for this purpose, if no noise accompanies it; but a basin of boiling water, renewed when it becomes cold, is sufficient.

Although *cleanliness* in the sick-room is essential, yet it may be carried so far as to become an annoyance to the invalid, and consequently to prove injurious. It is not requisite to sweep the room daily, nor to dust and to arrange the furniture every morning, provided order be preserved in the room, and nothing but what is immediately necessary for the comfort and the convenience of the invalid be permitted to remain in it. It is truly distressing to observe the confusion which prevails in some sick-rooms; everything being out of place, and to be searched for when it is wanted.

The period chosen for cleaning and arranging the sick-room should be the morning; as, after a night's rest, the patient is more able to bear the little noise and bustle which it always more or less occasions. The carpet should be sprinkled with moist tea-leaves and lightly swept; and during this operation the curtains of the bed, if there be any, should be drawn.

It is scarcely requisite to insist on the necessity of the utmost attention to the cleanliness of everything in the sick-room. The moment after any vessel or implement is used by the invalid, it should be removed from the apartment, and returned as soon as it is cleaned. Nothing in the form of a slop-basin or a slop-pail is admissible: they only administer to the laziness of nurses.

The necessity of cleanliness in the vessels used for the food of invalids is strikingly illustrated in the bad effects arising from the neglect of it when an infant is brought up by hand. In such a case, if either the feeding-bottle, or the boat, which is employed be not instantly cleansed after the meal has been given, the small portion of the pap or food which remains in the vessel becomes sour, and taints the whole of the fresh food mixed with it, causing colic and convulsions in the infant. The same risk of injury occurs in the sick-room, if the vessels used for administering food to the invalid be not instantly and well cleansed after every time they are used.

It is too customary also to use one glass or cup for administering medicines, and to leave it unrinsed from time to time—a custom which may prove as deleterious as a defect of cleanliness in vessels employed for food. Some medicines, when they are exposed to the air, rapidly undergo changes which alter their pro-



perties; and this alteration having been undergone by the small portion which is always left in the glass or cup, communicates the disposition to be decomposed to that which may be next poured into the cup. An active medicine may be thus rendered inert; or one which is mild in its operation may be so changed as to operate with hazardous energy. The same precaution, as to cleanliness, is also requisite as to the minim measure, when the medicines are directed to be administered in a form which requires its employment.

It is a common error to imagine that a sick-room should always be either *partially* or *wholly darkened*. In some diseases, as, for example, fevers, when the eyes are acutely sensible to light, so that they remain half closed, and the eyebrows are contracted, the greatest relief is experienced from darkening the room. When delirium is present, a certain degree of darkening is in some instances serviceable; whilst in others, especially when the delirium is accompanied with visual illusions, nothing so readily dispels these, and consequently abates the delirium, as the admission of the full daylight into the sick-room. There is much difficulty, however, in determining which state of the apartment is likely to be most serviceable in any particular case. Observation of the effects of light and darkness, in the individual case, must be our guide.

These illusions of the sight are generally the result of former impressions, renewed at a moment when the brain is in such a disturbed condition as to set aside the exercise of judgment. In this condition of the brain, the renewed conceptions are not readily corrected, as in health, by impressions received from the external world; hence, they become more vivid in the mind of the invalid when the sick-room is darkened, and all visible objects are shut out. They are usually dispelled by new impressions on the organ of sense chiefly implicated; on which account, those which are connected with sight seldom occur during the day, when real objects are presented to the eye, unless the brain be so over-excited as to bring the conceptive faculty into intense exercise, sufficient to awaken those false perceptions which create a belief of the presence of individuals not only not present, but who have been long dead. This state of the mental organ is similar to that on which depends the spectral illusions of the insane, but differing from it in its transient nature. I have frequently witnessed the conversation with one of these spectral beings instantly terminated, and the whole illusion dispelled, on opening the window-shutters of the room; whilst the invalid has thus expressed himself: "Bless me! I thought I was talking with Mr. —, just



now; I must have been dreaming; for now I recollect he has been dead many years." A twilight obscurity in the sick-room is often more productive of these illusions than darkness.

When all the arrangements are completed in the sick-room, little benefit can be anticipated if a proper nurse be not obtained to render them available to the invalid. Before describing the qualifications requisite to constitute an efficient nurse, I cannot avoid embracing this opportunity of mentioning the great difficulty of procuring properly instructed nurses in this country. It is, indeed, to be greatly lamented, that amidst the numerous improvements which characterize the present era, the females who assume to themselves the character of sick nurses, and are employed as such, are still left to acquire information respecting the important duties which their office demands, from imperfect experience, or from accident. We expect that the skill of our medical attendants shall be certified by diplomas and licenses before they are permitted to practise; but we leave their orders to be executed by the ignorant and the prejudiced, who not only too often fail in performing what they are ordered, but who, with the usual temerity of ignorance, presume to oppose their own opinions to those of the physician. Every female, who wishes to act as a sick nurse, should be obliged to serve a certain time as an assistant nurse in one of the public hospitals, and to receive a certificate of her efficiency before she leaves the establishment. The advantages which the public would derive from a body of nurses educated in this manner, must be obvious to every one who has had opportunities of observing the miserable working of the present system. We should no longer have to lament the neglect of cleanliness; the inattention to ventilation and temperature; the obstinate and presumptuous opposition to the orders of the medical practitioner in reference to diet, which are now so prevalent. We should no longer hear of doses of medicine being given hazardous to life; or of patients being poisoned by topical applications administered as internal medicines; and of numerous other evils which are now, unhappily, of daily occurrence.

In hiring a sick-nurse, the qualifications which should regulate our choice, refer to *age, strength, health, temper, disposition, habits, and education.*

1. *Age.*—She should not be under twenty-five, nor above fifty-five years of age. This period is fixed upon, on account both of the physical powers and the moral conduct of the individual. Under twenty-five, the strength of a woman has not reached its maturity, and is scarcely adequate for lifting patients in and out of bed, and for many other duties which require strength, con-

nected with the office of a nurse; but the strength and the muscular power in females begin to fail after fifty-five, when the natural transition from maturity to decay takes place. There is also a greater proneness to disease at this age than in the middle period of life. On the other hand, the gravity and steadiness of deportment essential to the situation can scarcely be expected from a young woman; whilst the natural irritability of temper connected with advancing life, renders a woman, above the specified age, incapable of patiently bearing with the whims and the caprices of the sick.

2. *Strength*.—The foregoing remarks respecting age render it almost unnecessary to say that a woman of a naturally delicate frame of body is unfit for a sick-nurse: at the same time, a coarse, heavy, and masculine woman is, for many reasons, objectionable. Whilst strength is requisite, the frame should be such as to indicate activity. The stature should not exceed the medium degree; a little below this being less exceptionable than a little above it, provided the appearance displays a frame well knit together. Obesity and a heavy movement are objections, as they are frequently connected with self-indulgence, defective energy, and an inability to keep awake, or to be easily aroused from sleep. At the same time, a moderate degree of corpulence is not an invariable objection; as it may be connected with both activity of the body and energy of mind, and is often associated with an easy, good-tempered disposition.

3. *Health*.—None of the qualifications of a sick-nurse are of importance more than health. An individual who herself requires attention is ill-calculated to attend upon others. A woman who is asthmatic, or has any difficulty of breathing, or an habitual cough; who is rheumatic or gouty, or has any spasmodic affection; who is afflicted with palpitation; or suffers from periodical headache, vertigo, or a tendency to paralysis; or who is consumptive, or scrofulous; or has defective sight or hearing; or has piles, or any skin disease; or sore legs, or anything which causes decrepitude, is disqualified for a sick-nurse. It is important, also, to ascertain that there is no hypochondriacal nor hysterical tendency, nor predisposition to mental depression. It is reasonable to suppose that the aid of the medical attendant should be requested, to determine and report upon the health of a person offering her services as a sick-nurse; but there are certain physiognomical and general appearances, connected with gait, attitude, and aspect, which, in a great measure, enable ordinary observers to judge for themselves.

Thus, there is a peculiar expression of the countenance, which

cannot readily be described, although it is recognised as indicative of general indisposition. It is accompanied with pallor, or sallowness, and a dark hue under the eye when chronic dyspepsia is present; and with an approach to lividity, when the lungs or the heart is more or less affected. There is, also, reason to suspect that the affection of the heart is of a chronic or permanent character, when turgidity of the features accompanies the lividity of countenance. Stooping in walking, an inclination to one side and bending a little forward; a slow and cautious movement; tremor, or slight, short, lateral movements of the head: an elevated or wing-like state of the shoulders; the skin dry, sallow, or brownish, and a foetid odour of the breath, all indicate some deviation from health, and demand the opinion of a medical attendant respecting them, before the individual should be hired as a sick-nurse.

4. *Temper and disposition.*—It is scarcely requisite to say that an attendant upon the sick should possess a happy, cheerful, equal flow of spirits; a temper not easily ruffled; and kind and sympathetic feelings; but, at the same time, not such as to interfere with firmness of character. The expression of the countenance should be open and winning, so as to attract the good-will and confidence of the invalid; a pleasing and gentle manner being more likely to gain esteem, and insure obedience to the orders of the physician, than the most persuasive arguments which can be addressed to the understanding of the patient.

Although beauty is not a quality to be sought for in a sick-nurse, yet, we are so accustomed to associate with it amiableness and gentleness of manner, that a certain degree of good looks is a recommendation. In sickness, when the mind is weakened, and the nervous system morbidly susceptible, a harsh look or an unkind expression sinks deep into the mind of the invalid; and when the disease is of a nervous kind, a melancholy, anxious, or foreboding look, or one which in any degree indicates an apprehension of danger, either in the physician or the nurse, instantly excites alarm in the mind of the invalid; and may counteract, in a great measure, the influence of the medical treatment.

Is there no hope? the sick man said,  
The silent doctor shook his head:  
And took his leave with signs of sorrow,  
Despairing of his fee to-morrow.\*

And well he might; for nothing would be more likely to insure the fulfilment of his prognosis than such a look.

On the other hand, a collected, cheerful expression of the countenance, in the attendant on the sick, is likely to inspire hope, and to aid the efforts of the physician for the recovery of his patient.

The general disposition of a sick-nurse should be obliging. Every little office which the invalid may require to be done, should be performed at once, and without the smallest apparent reluctance, even when the necessity for its immediate performance is not absolute. There is also an earnestness of manner, which should, if possible, be obtained or acquiesced in by the sick-nurse, as it impresses the idea that she feels deeply interested in the case; a circumstance which is always highly appreciated by the patient. Every nurse should also be of a disposition to be easily satisfied; indifferent respecting the regularity of her meals, or interruptions during them; she should be able to bear confinement, and to suffer without murmuring the encroachments which the state of the patient must, frequently, make upon her hours of sleep.

Antipathies, in a sick-nurse, are serious objections to employing her. As an example, let us suppose the antipathy to be to spiders: if one of these insects is seen, or supposed to be seen, upon the bed of the invalid, she would not approach it, however urgently her assistance might be required at the time; and thus the patient would suffer.

Finally, it is unnecessary to say that a nurse should be honest, as no description of servant has so much in her power. But the honesty of the nurse is not to be measured by her respect for property; she must be above imposing on the physician, with respect either to medicines or to diet. Her religion, also, should be sincere, but not pharisaical; and although she may occasionally persuade her charge "to put his trust in God, the fountain of health,"\* yet she must recollect that preaching is not her province; and, when mistimed, even the best advice may prove not only profitless, but injurious: and this is especially likely to be the result, when the doctrines which she professes are of a controversial kind.

With respect to gossiping, it is a detestable habit under any circumstances; but, in a nurse, it may be productive of the greatest danger, produce family feuds, and a thousand other evils.

5. In her *habits*, a sick-nurse should be sober, active, orderly, and clean and neat in her person.

\* Fuller.

The first of these habits—namely, *sobriety*,—is so essential a qualification in every attendant in the sick-room, that it requires no comment. Happily, the desire for ardent spirits is now less frequent than formerly, when women were seldom employed as nurses until they were nearly superannuated, and until their habits, good or bad, were too firmly rooted to be removed. It is, however, to be lamented that the predilection of nurses for stimulants is not yet eradicated; and it is too apt to be nurtured by the mistaken idea, that the duties of the sick-room require an extra allowance of stimulus, especially when the nurse has to sit up at night; in which case, brandy-and-water is usually given to her. But if a nurse have an adequate allowance of good wholesome food, and be not over fed; and if she be permitted to take exercise for an hour or two daily, out of doors, in order to prevent the swelling of the legs to which nurses are subject, from their sedentary occupation; she will perform her duties well, and with little personal fatigue, without either wine or brandy.

Among other habits which disqualify a nurse is *snuff-taking*. This dirty mode of stimulating one organ cannot be commended in a man, although so commonly employed; in a woman, it is disgusting; in a nurse, highly reprehensible.

The *activity* essential for a good nurse does not imply a bustling or fidgety manner, but a quiet, steady method of proceeding in the performance of her duties, equally devoid of fluster, turbulence, or noise. This activity is generally associated with orderly habits; a most valuable qualification, and without which the sick-room becomes a scene of confusion and disgust. Every medical man must have witnessed this state of disorder with regret, when, on visiting his patient, he finds no chair to sit upon, until some article of bedding, or of clothing, be removed from it, and the seat dusted with the apron of the nurse; and when a former prescription, or anything else, is wanted, he must wait until the nurse rummages out half a dozen of drawers in search of it.

Another quality, usually conjoined with activity and orderly habits in a nurse, is cleanliness in her own person, and in that of her charge, as well as that of the sick-room. The dress of a nurse should be simple and neat, without trimmings. Nothing is more out of place than a fine lady attempting to perform the duties of a nurse. Whatever may be the stuff of which it is made, the apron should have pockets in it, in the fashion of the Parisian servants. Neither the gown, nor any of the outer garments, however, should be woollen, especially if the disease be infectious; as, owing to its spongy tissue, woollen is apt to absorb and retain the infection.



When the disease is decidedly infectious, the apron of the nurse should be made of glazed calico, or oiled silk.

As the time of a nurse is at the disposal of her employer, her hair should be dressed in the simplest mode; curls are altogether out of place.

It may appear a refinement to talk of the *education* of a nurse; but there is not a greater difference between noon-day and midnight than between an educated and an ignorant nurse. The former is often an aid to the physician, not only in carrying his orders into effect, but by observing and informing him of symptoms of great importance which have occurred during his absence: whereas the latter is a source of constant anxiety, and too often assumes the privilege of acting in direct contradiction to his orders, and according to her own opinion.

Every nurse should be able to read and write. The better informed, the less likely is she to be biassed by low prejudices. A nurse, also, who cannot read, may be the cause of much mischief in the administration of medicines. Many years since, I was attending, in conjunction with the late Doctor Baillie, a lady labouring under typhus fever. The attack was terminating so favourably, that, a few days after our patient was able to be in her drawing-room, we discontinued our daily visits, and saw her every third day. Although convalescent, yet she was still taking bark draughts twice a day; and as opium, when administered internally, greatly disturbed the brain and deranged the digestive organs, an opiate liniment was rubbed every evening along the spine. We had paid our last visit; and having congratulated her husband and family on her restoration to health, we took our leave. Three hours afterwards, I was again hastily summoned; and, on arriving at the house, found my patient a corpse. The agonizing feelings of the family may be more readily conceived than described; the overwhelming grief into which they were plunged was greatly augmented by the reflection that the daughters were, in some degree, the innocent cause of the awful event—an impression which proved nearly fatal to the husband, and fixed upon the daughters a settled melancholy, from which they have never entirely recovered. The fact was this—the nurse, who was an old servant in the family, could not read, and, consequently, had not been trusted to give her mistress her medicines, until a few days before her death. Owing to the convalescence which was then established, the young ladies ventured to walk out in the middle of the day, leaving their mother in the charge of this nurse. On the occasion in question, the poor woman had administered the opiate embrocation instead of a bark draught.



After the relation of this distressing anecdote, it is unnecessary to add any further comment on the danger of ignorance in the immediate attendant upon the sick.

The term "*an experienced nurse*," is supposed to comprehend every good quality : but let us examine the meaning of the phrase.

Experience is a quality which deserves to be much and justly prized in a nurse, were the term not too frequently misapplied, and confidence placed in the nurse merely because she is advanced in years and has seen much, without any inquiry as to her capacity for observing, and making a proper use of what she has seen. Number of years and much opportunity are not a guaranty of wisdom nor of true experience. Age undoubtedly may be supposed to afford the means of enlarging the ideas ; but every one is not endowed with the power of benefiting by the best opportunities ; and it is here that the advantages of education are displayed in the nurse. Without it, seventy years may have merely added to her sum of stupidity. The poor woman has had eyes ; but she has never fixed them with attention upon what was before them ; and when she has accidentally observed, having no capacity for generalization, the observations, like most isolated facts, have been lost. She is the mere creature of routine ; a machine moved by custom or prejudice : whereas the properly educated nurse acquires the power of observing and comparing, and consequently of reflecting and drawing proper conclusions. It is this power of comparison which education bestows, and which, in conjunction with a habit of observing, accumulates knowledge in every rank of life. The old and the ignorant nurse appeals to her experience ; but what is the value of that experience ? The educated nurse, on the contrary, acquires from experience the capacity of observing changes in the progress of the disease which call her judgment into acquisition, and which may justify her from pausing in the plan laid down for her guidance, until the physician is sent for, or repeats his visit. Her reasons for the deviation from orders will be listened to by the doctor ; and, without lowering his dignity, a useful hint from an intelligent nurse may be adopted and acted upon, much to the advantage of the patient. From what has been said, the necessity of education and intelligence in the sick-nurse cannot be doubted.

## SECTION II.

NECESSITY OF INTELLIGENCE, SELF-CONTROL, AND JUDGMENT, IN THE UNHIRE ATTENDANTS OF THE SICK-ROOM. THE MANAGEMENT OF THE INVALID ILLUSTRATED IN DIFFERENT DISEASES.

THE selection of a good nurse, however eminently qualified she may be for her duties, does not supersede the attendance of a relative or a friend in the sick-room; on the contrary, I can conceive no condition so deplorable as that of an invalid left altogether to the care and management of a hireling. It is, nevertheless, too true that few ladies, even those who are wives and mothers, have any acquaintance with the arrangements of the sick-room, and the management of the invalid; they are, consequently, too often forced to be guided by, and to rely for instruction on, the nurse, instead of being able to superintend her conduct, to ascertain that she performs her duty, and to correct her failings. This is a lamentable evil in the education of females of the higher and the middle classes in the present time; and the object of this volume is to remove as far as possible the dangerous consequences of this state of ignorance.

The degree of *intelligence* which is demanded in a nurse is very different to that which is requisite for a wife or a relative in the sick-room. The intelligence of the nurse is directed to supply the wants of the invalid, to administer to his comforts, and to obey the instructions of the physician; that of the friend or relative involves the power of discriminating disposition and temper; of watching the progress of the disease, and judging of the propriety of not pursuing certain measures, which, although indicated by the symptoms at the time of prescribing, yet may require to be altered, and consequently detailed to the physician, whose presence may be requisite before his next intended visit. It is of the utmost importance, also, that relatives attending in the sick-room should be able to control their feelings in the presence of the invalid.

Nothing is more essential, in the domestic management of diseases, than a knowledge of the natural disposition and temper of the invalid. An irritable or a passionate man requires very different management from that which is proper for a man of naturally mild and easy disposition. Disease awakens, in an augmented degree, the irritability of the former; he becomes impatient of contradiction; and every time his opinions are injudiciously opposed, the turbulent agitation of the nervous system which follows, either increases the disease or weakens the influence of the

remedial agents. On the other hand, a mild and gentle disposition often leads to extreme sensitiveness, when disease attacks the body: a word, a look, is sufficient to touch some sympathetic cord; to unstring the whole nervous system; and to augment the morbid susceptibility already present in the habit to a degree which is not always devoid of danger. Much discretion and judgment, therefore, are requisite in both instances: in the one case, to prevent ebullitions of temper; in the other, to refrain from anything that might be construed by the invalid into harshness; and yet, at the same time, in each case, to maintain that influence over the patient which the treatment of every disease demands in an attendant on the sick. The degree of intelligence, and the proper regulation of mind adequate to such a task, cannot be expected in a hired nurse; and it is only found in those, even in a higher sphere of life, in whom education and the acquirements resulting from it have been of a description to constitute a well-regulated mind. It must, however, be admitted that the power of judging is less diversified in different individuals than is generally supposed; but the difference between one person and another, on this point, is greatly owing to the degree of attention which is bestowed upon the things or the facts on which the judgment is to be exercised. It is well known, that, in the lower ranks of society, no habit is so little cultivated as the habit of attention. Thousands pass from the cradle to the grave without seeing correctly a single object which passes before them; and if we reflect how essential this faculty of the mind is for the improvement of the intellect, the importance of not intrusting the domestic management of the sick wholly to hired nurses surely requires no comment. But this power of steady attention exacts a degree of abstraction, which can only be acquired by a voluntary act of the mind; yet, when it is once secured, no mental operation is so much strengthened by exercise. It is erroneous to suppose that such a condition of mind is only demanded for those who are destined for controlling and regulating the destinies of empires, or for advancing the intellectual character of mankind; it is equally essential in the ordinary engagements of life, and in none of these more than in the management of the sick-room. This quality farther embraces the power of successfully cultivating an active and inquisitive habit, which seeks for information from every passing event.

In those who are imperfectly or erroneously educated, the judgment is apt to be biassed by *prejudice* and *antipathies*; and, under the influence of these, it is misdirected in a manner of which the individual is often wholly unconscious; thence the necessity of

freedom from prejudice in the attendants in the sick-room, and the farther importance of the friends or relatives of the sick being able to superintend the conduct and the management of hired nurses. On the other hand, the judgment, even in the well-educated, is apt to be misled by the *affections*, the influence of which is as much opposed to the healthy exercise of discrimination as the prejudices of the ignorant. Self-control, therefore, is also an essential qualification for the sick-room. This, however, when properly cultivated, does not interfere with the exercise of the greatest tenderness and sympathy; but it imparts a firmness and steadiness of action which cannot be expected either from hired nurses, or from those educated to foster what is erroneously termed fine feelings.

It is only from knowing that the attendants of the sick are possessed of intelligence and self-control, that a physician can rely upon having his orders correctly and duly executed: when those qualities are absent, he has to dread, on the one hand, the presumption of ignorant prejudice; and, on the other, the improper yielding of sensitive indulgence. To the invalid, also, it is important to know that the directions of his physician are fulfilled by an intelligent person; for, even in the most severe diseases, as long as the mental faculties remain unaffected, a sick man is capable of detecting ignorance, or the effects of prejudice, in his attendants; and, when he is convinced of the existence of either, all the influence of the individual, whether nurse, or friend, or relative, is at an end. But such a control over the mind of an invalid can easily be acquired by those who seem to contemplate what is passing before them with a calm and steady attention, and who are not in the habit of pronouncing hasty opinions. The possession of such a sound understanding, and its absence, in the physician or the nurse, or the other attendants of the sick-room, is, as I have already said, more easily detected by the invalid than is generally supposed; and it is from a conviction of its presence only that confidence can be expected. But, even with this power of appreciating the capacity of his attendants, it is possible that an invalid may be acted upon and misled by the persuasion of a plausible individual; for, under no circumstances is the mind so liable to be fettered by the opinions of others as in disease, when they refer to the treatment of the malady. I have witnessed instances in which men of the highest powers of intellect, and the most extensive acquirements, have listened to the advice of ignorant nurses,\* or misguided friends, who have presumed to question

\* The most remarkable instance of this obliquity of judgment which I have known, lately occurred in a medical man, who, during an illness of

the medical treatment of the case. Such a remark as this—"I have seen a case the same as yours get well directly by a very different kind of treatment"—cannot be too severely deprecated.

The evil resulting from weakness of this description is, indeed, often great; it is not confined to the nature of the empirical remedy alone, which may be perfectly harmless; but, frequently, the loss of time, from neglecting the proper treatment, may fix a disease, easily removable in the first period of its attack, so firmly in the constitution as to resist the influence of the most efficient practice at a more advanced stage. Could no other proof be obtained, this would be sufficient to display the necessity of placing the sick-room under the guidance of an intelligent, reflecting individual, whose attention will be alive to everything that passes, and who is capable of forming a correct opinion, and reporting upon the value of the medical treatment from its effects. Although an individual thus gifted is not likely to be found amongst the race of hired nurses, yet it must be admitted that such a condition of mind is not incompatible with very limited attainments in other affairs; but, at the same time, it is never found unaccompanied by that quality which we usually designate sound good sense. In the ordinary business of life, it enables its possessor to act with promptitude, and the decision to which it leads is usually correct: in the sick-room it is, on that account, a qualification of intrinsic value.

Were the business of the sick-room (independent of the wants and comforts of the invalid) confined to the mere observation and collection of facts—namely, the noting of the symptoms of disease—and reporting them to the physician, it would be superfluous to urge the necessity of superior intelligence in its superintendent; but many of its duties require not only a well-regulated understanding, but an equally sound condition of the moral feelings and the benevolent affections, with a recognition of the authority of conscience in the whole operations of life. In the period of sickness, under the direction of the judicious and discreet, an invalid may be led to the investigation of his moral and religious condition, and to review his past conduct, with the determination of turning the result to his future welfare, should he happily recover and re-enter society. Surely such important duties as these cannot be intrusted to the unqualified, or the ignorant, or the hireling; nor can more be required to demonstrate the im-

which he died, objected to every prescription that his medical friends suggested, but took and placed confidence in a nostrum proposed by the wife of his coachman!



portance of adding to the other branches of female education a knowledge of the various important duties of the sick-room, which females, whether as mothers or daughters, or wives or friends, are likely to be called upon to fulfil.

#### PROGNOSTICS.

In every disease the medical attendant is naturally called upon to deliver his opinion of the degree of danger which hangs over the patient: hence, it is unnecessary to enter into any minute details on the subject of prognostics. But, as in many diseases changes occur, in the absence of the practitioner, which ought instantly to be examined into, in order that the danger likely to accrue from them may be averted, it is important that the friends and ordinary attendants of the sick should be aware of their presence, so as to obtain the immediate assistance of the medical attendant. Were this information, also, more generally diffused, many unnecessary visits would be saved to the physician, and much unfounded suspicion of danger prevented from distressing and torturing the minds of the friends of the sick.

In fevers, *delirium* alone should excite *no* alarm, unless it be very high, or of the low, muttering, incoherent kind. In jaundice, and in diseases of the chest, it is alarming; and, in the latter stages of pulmonary consumption, its presence always indicates the approach of death.

Great *confusion of thought*, *loss of recollection* of the most recent occurrences, a restless, wandering eye, and a correspondent vacancy or confusion of countenance, are always to be dreaded in fevers and in diseases of the brain. An expression of *great anxiety* is equally alarming in all acute diseases; and a presentiment of death is still more to be dreaded.

*Hoarseness*, with constant spitting, occurring at an early period in small-pox, is very unfavourable.

*Squinting* in affections of the head ought to be particularly noticed, and mentioned to the attending practitioner; and the same remark applies to a greatly *contracted*, or a *dilated*, or an *immovable* condition of the pupil of the eye; or the turning up of the pupils under the upper eyelids.

*Deafness* is *not* an unfavourable occurrence in continued fever; but a sudden attack of headache in pulmonary diseases ought instantly to be mentioned to the physician.

The *sudden disappearance of pain* in inflammatory affections of the bowels is always to be dreaded; but it does not in every instance portend the existence of mortification.



*Cough* depending on inflammation of the bronchial membrane,\* suddenly supervening on a suppressed eruption, is always to be dreaded.

In *croup*, when the breathing is *audible*, or when there is a *crowing* sound in inspiration, or a *cooing* or *croaking* respiration, danger is present.

In *hooping-cough*, when the paroxysms suddenly increase in violence, and the face becomes livid, and the thumbs are drawn across into the palms of the hands, the appearance of convulsions may be anticipated : hence immediate notice of these symptoms should be communicated to the medical attendant.

*Rigors* invariably excite alarm ; but they are only dangerous in chronic internal diseases, in which they often indicate the formation of pus, or the existence of suppuration.

*Pallidness* of the countenance, with a slight degree of *lividity*, are symptoms of hazard in inflammation of the lungs.

The *position of the patient* as he lies in bed, especially in fevers, is of much importance. Constantly lying on his back, with a tendency to sink to the bottom of the bed ; a propensity to keep the arms and the feet out of bed, and to uncover the trunk ; or to pick the bed-clothes ; tremors ; twitching of the tendons ; grinding of the teeth, and sleeping with the eyelids half open, and the white of the eyes only seen ; are all justly regarded as symptoms of great danger.

*Fainting* (*Syncope*) is to be considered alarming in diseases of the heart, or during profuse bleeding from the nose, or from any other part : *deep sighing*, also, under such circumstances, is most unfavourable, and often indicates rapid dissolution.

*Hiccup*, in the advanced stages of either acute or chronic diseases, is invariably alarming.

*Difficulty of swallowing*, also, in the advanced stages of fever, palsy, and affections of the head, always indicates extreme danger ; *vomiting*, on the contrary, is not unfavourable, unless it be very severe and protracted ; but, if the ejected matters be putrid, or feculent, then the vomiting is always to be dreaded.

*Coma*, or an irresistible propensity to sleep, following the sudden suppression of gout, or the cessation of periodical bleeding in piles, or the healing of old sores, is always alarming, and requires prompt medical assistance.

*Convulsions* without fever or any affection of the head, seldom prove dangerous : but they are never free from danger when they are accompanied with stupor or coma. They are also dangerous

\* The membrane lining the air-tubes of the lungs.

when inflammatory fever is present. They are less dangerous in women than in men, in the young than in advanced age. In infancy, convulsions are more to be dreaded in the robust than in the delicate and irritable child.

*Diarrhœa* is, under every circumstance, an unfavourable event, when it occurs either in fevers, or in the termination of chronic diseases; and the passing of involuntary stools, when scarcely any diarrhœa exists, is equally to be dreaded.

*Retention of the urine*, as well as its *involuntary discharge*, is always an unfavourable symptom.

*Purple spots* appearing on the skin, *livid lips* and *cheeks*, *oozing of blood*, *sudden flushings* followed by pallor, are unfavourable symptoms; and the appearance of œdematous swellings of the legs and skin, in the last stage of chronic organic diseases, always indicate approaching death. When *purple spots*, also, appear in small-pox, with flattening of the pustules on the trunk of the body, and a white pasty aspect of the eruption in the face; and if, at the same time, the extremities become cold, any hope of recovery can scarcely be entertained.

Great and continued, or progressing *emaciation* in chronic diseases, and what is termed the *facies Hippocratica*, are to be dreaded.

*Excoriations* on the parts on which the body rests,—for example, the haunches, or the lower part of the back,—especially if these become livid and sloughy, always indicate extreme danger.

Great *difficulty of breathing*, even to a feeling of suffocation, is not necessarily hazardous in *asthma*; for although few diseases are so little under control by the interference of the physician, yet, asthma seldom proves fatal, unless it tends to the production of other diseases.

In *consumption*, partial sweating, as of the head, the chest, or the limbs, are always unfavourable symptoms.

When *pregnancy* occurs in a woman labouring under consumption, the disease is arrested, until after delivery, as if Providence threw a shield over the mother for the safety of the offspring; but, as soon as the confinement is over, the malady proceeds more rapidly than before.

The *sudden disappearance of swelling* of the legs, in chronic organic diseases, is indicative of approaching death.

When a child, instead of rallying after any acute disease, becomes *emaciated*, and the belly is large and tympanitic, there is always much danger.

*Ovarian disease*, or, as it is usually termed, *ovarian dropsy*,

has hitherto proved incurable ; but it is relieved by tapping ; and, if the powers of life be sustained by proper food, and carriage exercise in the open air ; and if all medicines be let alone, except such as are required to regulate the bowels, life may be sustained for many years.

All diseases, not involving organic changes, are, with a few exceptions, more or less under the control of medicines, and are consequently curable. But some diseases, in which no organic changes have been discovered, are nevertheless incurable. This is the case with spasmodic asthma, which has rarely been cured.

It is true that functional disturbances are not unfrequently associated with organic diseases ; but, under such circumstances, it is the province of the attending physician to point out to the friends of the patient the greater or the less degree of danger in these complications.

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### SECTION III.

#### DIRECTIONS RESPECTING THE GENERAL MANAGEMENT OF CONVALESCENCE ; AND OF DIET IN DISEASE AND CONVALESCENCE.

In numerous instances, much hazard often exists after disease has disappeared, and when the patient is declared convalescent : and as this period in the removal of diseases is left to the management either of the patient himself or of his friends, some general remarks respecting it, and also in reference to particular diseases, are requisite.

In every recovery from sickness, whether external or internal, before the salutary advantages obtained from the treatment be confirmed, the organ or part which has suffered must be either left at rest or be used, according to the nature of the case. Thus, if any part have suffered from inflammation, it must not be used for some time after the inflammation is subdued. If the eyes have suffered, the person must neither read nor write, nor expose the eyes to the heat of the fire, nor to a strong light, until some days after every trace of the disease has disappeared. If the arm has been affected, it must be kept at rest ; and if the leg, not only should walking be refrained from, but the limb should be placed rather higher than the trunk of the body. If the previous disease has affected the brain, every mental exertion must be avoided ; and so on, whatever may be the organ which has especially suffered. Even when the exercise of the organ is resumed, it should not be carried to fatigue, nor, on any account, should it be such as to produce excitement. At the same time, it must not be for-

gotten that, in the treatment of external injuries, when it has been necessary to keep the limb long in a sling, in one position,—as, for instance, in fractures,—the muscles which bend the arm acquire from the habit a contraction which cannot be overcome by the antagonist muscles, owing to the length of time they have been on the stretch weakening their contractile power. The arm, therefore, should be frequently taken from the sling, and, being rested upon the elbow, a moderate weight should be held in the hand, and friction with oil employed upon the contracted muscles. It is true that surgeons usually give directions for this operation, before they quit the management of the case; but surgeons, as well as physicians, are sometimes dismissed before the convalescence is complete; on which account, arms and limbs have remained contracted for life, from a want of the knowledge necessary to counteract the evil at an early stage.

I say nothing respecting the continuance of remedies during convalescence from many diseases, except urging the necessity of regulating the bowels.

The most important part of the management of convalescence certainly refers to *air*, *exercise*, and *diet*. The errors daily committed, in all of these matters, exert the most powerful influence in retarding complete restoration to health; and often, indeed, induce evils of a more formidable kind than the diseases from which the patients have just emerged.

1. *Air*. In every convalescence, whatever may have been the nature of the disease, if it has been so severe as to wear down the strength of the invalid, country air is essential. The benevolent Author of our existence has made medicinal the hills, the vales, the groves, and all the harmonies of nature; and in the repose of these man finds a balm, not only for the wounded spirit, but for his stricken body. When emerging from the bed of sickness, the limbs scarcely able to perform their office, and the mind still looking back upon the turbulence, the noise, and the vexations of business, with disgust; the breath of dewy morning, the sidelong beams of the rising sun throwing the shadows of the trees across the glittering meadow, the music of some neighbouring copse, mingling perchance with the gurgle of a prattling stream, convey not only more heartfelt delight to the mind than the richest gifts of smiling Fortune; but they act as the most powerful restoratives in reinfusing fresh vigour and energy into the powerless frame. In convalescence, therefore, the choice of a temporary residence in the country is of much importance.

In selecting a country residence for a convalescent, care must be taken to ascertain whether any source of malaria exists in the

neighbourhood; as, in that case, even if all other circumstances be favourable, the place is exceptionable. It has been often supposed that a situation on an elevated spot above a marsh is not influenced by the pernicious vapours from the marsh. Many instances might be adduced to demonstrate the fallacy of this opinion; it is only necessary to mention a few. At Neuville-des-Dames, above Chatillon on the Indre, more fevers prevail than close to the marshes which exhale the malaria: and, at Malta, the malaria produced on the beach beneath a cliff causes no bad effect on the spot itself; but it affects a village above the cliff so severely as to produce its occasional abandonment.\* It is supposed that this depends on currents of air carrying the concentrated malaria to the higher grounds. But, whatever is the cause, the necessity of avoiding such spots is evident.

The distance to which malaria may be conveyed, sufficiently concentrated to cause infection, must vary, owing to many causes breaking or obstructing the current; but, on an average, in Europe, it has been estimated to be 1400 to 1600 feet in elevation, and 600 to 1000 feet in a horizontal direction.† In the West Indies, vessels have been infected 9000 feet from the marshes on the adjoining shore. When a breeze blows over a swamp, the deleterious vapour may be conveyed many miles. The Convent of Comaldules, which is seated on a high mountain, a league distant from the lake Agnano, is often infected by the wind which blows over the stagnant water of the lake. It is a fact which should be known, that the interposition of trees often forms a perfect safety screen in such cases.

If a convalescent, however, is driven to seek a lodging in a swampy country, as the floors of houses have a strong attractive power for malaria, the second floor is always more healthy than the first, and the third still more salubrious than either of the former. The bed of the convalescent should also be elevated from the floor.

When the disease has been inflammation of the lungs, and especially if it is apt to recur in cold weather, the winter and the spring should be spent in a more genial climate than that in which the invalid usually resides. If his residence, for instance, be in London, and if he cannot conveniently go to Madeira, he may winter with advantage at Cove, near Cork, or at Torquay, in Devonshire, or Under Cliff, in the Isle of Wight.

2. *Exercise.* In convalescence, much caution is requisite in apportioning the exercise to the degree of returning strength.

\* Macculloch on Malaria.

† Monfalcon.



When the convalescent is still too feeble to take sufficient exercise on foot, the best substitute for it is riding on a donkey or a pony; but, as soon as walking can be borne, it should be preferred to either horse or carriage exercise. When walking, however, causes embarrassment of breathing, or palpitation of the heart, or a sensation of weariness in the loins, it should be discontinued; but, when it excites no inconvenience nor discomfort, it should be daily increased, and at length continued to the point of fatigue.

The morning is the best time for the exercise of the convalescent. The balmy breath of the new-born day; the freshness of the dewy fields; the music of the feathered race poured from every shadowing copse; the tiny hum of the wild bee; and a thousand other agreeable impressions, incident to the hour, create a buoyancy in the mind, which, added to the renewed vigour of the body derived from the repose of the preceding night, bestow an elasticity to the frame, which is experienced at no other period of the day.

3. *Diet.* In health, diet may be left, in a great degree, to the inclination or the taste, as far as regards the quality of the food; and, although diseases occasionally originate from repletion, yet, in general, the appetite may be considered as the best regulator of quantity, when the food is simple, and the appetite is not pampered by high seasoning and rich sauces. In disease, however, a very opposite rule is to be observed: the regulation of both the quantity and the quality of the food is of the utmost importance. The taste is often so perverted as to desire that which would prove injurious; and were appetite to be the guide of quantity, diseases would frequently not only be increased in severity, but life itself would be brought into jeopardy. Many substances, also, wholesome in themselves, are rendered unwholesome by cookery; whilst, on the other hand, the art of the cook, in many instances, corrects the unwholesome quality of the food: hence, dietetics and cookery are important matters of consideration, in the management of the sick-room.

As soon as solid animal food can be taken with impunity, that which is most digestible should be selected. An opinion has generally prevailed that gelatinous matters, and meats which readily yield jelly—such, for example, as veal and lamb—are the most easily digested, and, at the same time, are also the most nutritive. This is a mistake; for, with the exception of poultry, the flesh of young animals is stringy and of a lax fibre, and is even less easily digested than that of too old animals, which presents a great density of texture. The middle-aged animals afford the most digestible food; and none is so much so as tender wether



mutton of from four to five years old. On this account, mutton is better fitted for the convalescent than either lamb or veal, or even beef, which is of too firm a texture, and cannot be digested so readily by a weak stomach as mutton, although it is more nutritive than mutton. Venison is more nutritive and more digestible than mutton; but it is more stimulant. Glutinous and gelatinous food is also, in every instance, less digestible than solid meat, even when it actually contains more nutritive matter; hence it is ill adapted for invalids. Poultry is less digestible, and even less nutritive, than game of a winged kind; but the latter is not adapted for invalids labouring under acute disease, on account of its stimulant properties. Game, however, is well adapted to bring up the strength of convalescents who have been greatly weakened by previous disease. Much, nevertheless, depends on the condition of the patient at the time.

Nothing tends to lessen the density of the fibre of every kind of animal food so much as keeping it for a certain time before it is cooked. In this case, the tenderness is the result of incipient decomposition or putrefaction; but the utmost caution is requisite to prevent this from advancing so far as to present the slightest trace of taint, in the food of the convalescent. In the low state of vitality in convalescence, the change which commencing decomposition (putrefaction) causes, renders animal food, in that condition, a source likely to occasion either a relapse into the disease from which the patient has recovered, or to form a new disease.

In examining the relative value of other articles of diet adapted for the sick and the convalescent, the first which presents itself to our notice is

*Milk.*—As milk is the food of almost all young animals, its digestibility appears at once evident; and there can be little doubt that it is very digestible, when it is drunk immediately after it is drawn from the udder of the cow, or that of the ass, or the goat, before its components have time to separate. When this separation is effected, either spontaneously by time, or by means of rennet or other agents, its properties are altered, and its digestibility is lessened.\*

*Cream*, when intimately united with the other components of milk—namely, the curd, or the caseous part, and the whey,—is not the same substance as after its separation. In the milk, it is more easily digested, and is the most nutritive part of the milk.

\* The constituents of milk are caseous matter, butter, water, sugar of milk, chloride of potassium, acetate of potassa, phosphates of potassa and of lime, and traces of iron.

But, in its separate state, it is ill adapted either for the sick or convalescent, except in the form of butter, which is not unwholesome, unless it be eaten in excess or be melted.\* In the same manner the separate *curd* is indigestible; and *whey* itself, although highly nutritive, yet is flatulent; nevertheless, it is an excellent demulcent in many cases of disease. But none of the components of milk are equal to milk itself. It is often necessary, in convalescence, to dilute it with water.

With respect to the value of different kinds of milk, that of the *cow* is rendered lighter, and less oppressive to the weakened stomachs of invalids, when it is combined with an equal part of barley-water, and a small proportion of refined sugar. *Asses' milk* is heavier than water, being of sp. gr. = 1.023. It contains more saccharine matter than cow's milk, and it is, consequently, more nutritious; but it is apt to cause diarrhœa in very delicate persons; therefore, it cannot be taken in the same quantity, nor can it be continued for the same length of time, as the milk of the cow. The milk of the *goat* is still heavier than that of the ass: its sp. gr. is = 1.036. It abounds with curd, and contains more oily or butyraceous matter than cow's milk: yet it does not throw up so thick a cream. It has occasionally also the disagreeable odour of the goat.

*Eggs.*—It is not uncommon to hear that the yolk of a raw egg, beaten up with water and sugar, with the addition of a small quantity of white wine, is a light and nutritive aliment in convalescence, and even in some states of disease: but *eggs* are much less digestible in this form than when they are lightly boiled. In jaundice, however, arising from viscid mucus obstructing the orifice of the common duct, the yolk of a raw egg beaten up with cold water is serviceable. In whatever manner eggs are cooked, they are heating; and they always more or less favour costiveness, especially when the yolk is rendered firm.

*Fish*, at least the white kind, stimulates much less than the flesh of land animals; hence it is a proper food for those labouring under some acute diseases; and also for convalescents, when a sudden return to more stimulating food would prove hurtful. But it is not adapted for convalescents, when the object is to bring up rapidly the strength of debilitated habits. In such cases, as it leaves more feculent matter in the bowels than animal food, it is apt to excite intestinal irritation. The least heating kinds of

\* [Although cream is not as digestible as milk, yet it is much less liable to turn acid in the stomach; it is often beneficial to dyspeptics, either alone or diluted with water.]

fish are flounders, whittings, soles, haddocks, turbot, and eod; and, of these, the whiting is the best for invalids emerging from any acute disease. The flounder is next in point of digestibility; then follow in succession the haddock, the sole, the turbot, and the eod. All the coloured and the red-fleshed fish, such as the eel, the herring, the mackerel, the trout, and the salmon, although more nutritive than white fish, yet are oily and more heating than the white fish; and consequently, they are not adapted for the sick-room.

Raw *oysters* have been erroneously supposed to be both easy of digestion and nutritive. The latter opinion is, in some degree, true; but the former is erroneous. Raw oysters are less digestible than plainly cooked oysters. Both are improper for the sick and for early convalescents. Lobsters, crabs, prawns, cray-fish, scallops, and other shell fish, are still more objectionable.

If fish of any kind be admissible, it should be simply boiled: fried fish is even worse for invalids than the outside or the brown of roasted meat.

It is also true that, as there is more feculent matter left after digestion from fish than from the flesh of land animals, the former is not well suited to cases in which the bowels have been the seat of disease, and remain in an irritable condition; it may renew the diarrhoea.

In reference to *vegetable diet*, it is only the mildest description of esculent roots—namely, carrots and turnips—and a few esculent herbaceous plants, such as the cabbage, Brussels sprouts, broccoli, cauliflower, asparagus, and very young peas, that are fitted for the use of the sick. In preparing all of them for the sick-room, they should be well boiled in two distinct waters, until they are soft and very soluble, and in a state not to leave undissolved anything which could act as a mechanical irritant on the intestinal canal. When properly cooked, they are moderately nutritive, and free from any stimulant properties; and they are well adapted for the stomach of the sick, unless in cases in which the torpor of the organ is such as to permit them to run into the acetous fermentation and to prove flatulent.

With respect to *fruits*, they produce the most diversified effects: and, consequently, are more or less proper for invalids, according to circumstances, either connected with themselves or with the condition of the patient at the time. The stone fruits, with the exception of the ripe peach, or the nectarine, are to be rejected. The apple tribe, except very soluble pears, are still less admissible. The apple, however, when roasted, and when the seeds and the hard central parts, as well as the skin, are removed, is less

objectionable; and, as it possesses laxative properties, the roasted apple is well adapted for the sick, when food is at all allowable, and when the bowels are torpid. The orange, if fully ripe, is grateful and wholesome to all invalids, and is only equalled in these qualities by the grape; but in using the orange, the pulp should be rejected. Care, also, should be taken not to swallow either the skin or the seeds of the grape. Strawberries are little stimulant, of easy digestion, and more cooling than the other small fruits; mulberries are, also, unexceptionable; but currants and gooseberries, and even raspberries, are not free from objection for invalids labouring under acute diseases.

With the exception of *oat* and *wheaten bread*, all the varieties of farinaceous aliments may be regarded as modifications of starch, containing little nutritive matter, and therefore well adapted for the sick-room. It has been supposed that arrow-root, sago, tapioca, and similar substances, are very nutritive, because they form mucilages with boiling water: but this is not the fact; and were they very nutritive, they would be ill adapted for invalids. Rice in every case where the stomach is in an acescent state, is preferable to the other farinaceæ, because it is less fermentable.

The farinaceous food, which is ordered in the convalescence of children from acute diseases, is often made of bread so as to constitute *pap*. No description of food has a greater tendency than this to become sour; a quantity only sufficient for a single meal, therefore, should be made at a time; for what remains is always sour before the next meal; and even if the quantity be small, and it be mixed with fresh *pap*, it communicates its faculty of becoming sour to the whole mass.

#### FLUID ALIMENTS.

*Water*.—The best and the most universal beverage for the sick is *water*: but the qualities of water differ, according to the sources whence it is procured. The fewer foreign ingredients it holds in solution the greater are its diluent properties. Distilled water, or rain or river water\* filtered, and that of soft water

\* *Rain water*, being the distillation of water taken up from the earth by the solvent power of the air, is the purest of all natural water, if collected at a distance from houses. It, however, tastes vapid, a fault which may be remedied by pouring it frequently from one vessel to another, until it involve a considerable quantity of air. It contains portions of carbonic acid, carbonate of lime, and nitric acid; but the quantity is minute: its specific gravity is not greater than that of pure distilled water.

*River water* is softened by its exposure to the air in its current, which

springs which filtrate through silicious strata, are the only kinds proper for the use of the sick-room. Hard water, under whatever name it is found, whether as spring water, or pump water, or well water,\* should be excluded. The impurities of river and rain water are merely held in suspension; consequently, they are readily removed by filtration.

Water itself is aliment; many individuals under certain circumstances have lived for a considerable time upon it alone. Those who live chiefly on animal food require more drink than those who eat much vegetable matter. Water composes the greater part of all the fluids of the body; namely, the blood and the secretions; and when it is withheld, these become too acrid, and act almost as poisonous agents upon the nervous system.

The influence of water on the animal economy may be regarded in two points of view :

1. As an article of diet.
2. As a medicinal agent.

1. As an *article of diet*, in health, water is the beverage provided by nature for all animals, man not excepted. The sensation of thirst is the natural call for fluids, either to assist digestion, or to allay a dry, hot condition of the mouth and the gullet. The

enables it to deposit its earthy salts; but much of its purity depends on the nature of the channel over which it runs. It is purest when its bed is pebbly, as in mountain rills; but the water of some rivers, as, for example, that of the Thames, although loaded with mud, yet is soft and pure when filtered, and well fitted for the use of the sick, or the convalescent.

*Soft spring water* is a mere modification of rain water; but it sometimes contains, besides the foreign ingredients of the latter, some chloride of sodium (sea salt). The purest springs in Great Britain are—St. Winifrede's, in Holywell, Flintshire, Malvern, and Matlock. The most accurate chemical analysis has detected nothing in them, except a small portion of carbonic acid. The water of all springs welling from compact limestone is usually soft and pure.

\* *Hard spring water*, or *well water*, or *pump water*, as it rises from great depths, and suffers great compression in its natural bed, has its solvent powers augmented; consequently, it holds in solution several earthy salts; namely, carbonates and sulphates of lime and alumine, as well as chloride of sodium and sulphate of magnesia; hence it does not dissolve soap, and deranges the digestive organs. If it be boiled and allowed to cool, the calcareous salts are deposited, and it is then less objectionable as a beverage for the healthy; but under no circumstances is it proper for the sick or the convalescent.

Spring water, when it has either any obvious odour or taste, even when not sufficient to place it within the class of mineral waters, is unfit to be employed as a beverage.



consequence of not satisfying this call is fever of a nervous kind; and, if it be long resisted, inflammation of the air passages. In a healthy condition of the body, diluting fluid is requisite to obtund over-stimulant matters, which, without such dilution, tend to induce fulness and an inflammatory condition; and death soon follows the total abstinence from fluids. On the other hand, too much fluid is injurious; for, although the vital powers of the stomach counteract the tendency which it affords, by over-diluting the gastric fluid, to the fermentation of the aliment in the stomach, yet, when it is in excess, those vital powers languish; hence spontaneous chemical changes in the contents of the stomach take place, and induce dyspepsia. For all the purposes of dilution, *in health*, water is adequate, and it is the only truly wholesome beverage.

2. As a *medicinal agent*, water is demanded in every disease in which a dry skin, and an elevation of the natural heat of the surface, constituting fever, are present. In this case, the desire is for cold water, or cooling fluids; and it should always be indulged. The degree of temperature, however, must be regulated by the condition of the invalid: but the best medium temperature is between 50° and 60° Faht.; although even 60° is too low, when the debility of the frame is considerable. As a simple diluent, water is more effective when it is nearly of the same temperature as that of the body. In fever, the degree of thirst is generally in the ratio of the degree of the fever which is present; and the supply should be adequate to the demand. In a hot state of the body, if the perspiratory function be impeded, and the skin dry, the best means of counteracting this, and of inducing perspiration, is a sufficient supply of cold water. This is so obvious, that a learned physician wrote a book to prove that "cold water is the only true remedy for fever."\*

Thirst is also the result of excessive perspiration, owing to the waste of the fluid part of the blood which that causes; and tepid, bland drinks, in preference to cold water, are then requisite, not only to supply this waste, but also to maintain the perspiratory function now in operation. In such cases, however, tepid water alone is apt to excite nausea; consequently many kinds of diluents

\* In Spain, the *Dieta Aquea*, the system of the renowned Sangrado, is not yet exploded. Water is there the chief remedy in fever, and it is not uncommon to order from five to ten pints to be taken daily. In this respect, the Spanish doctors anticipated the Hydropathists; but all excess is capable of doing much mischief. Hydropathy has killed more than it has cured.



are employed in diseases ; but, nevertheless, it is the water which they contain that is the beneficial agent.

The qualities of the various kinds of beverages proper, and generally employed in the sick-room, should be known.

a. *Toast-water*, when properly prepared (see *Cookery*), which it seldom is, forms a useful beverage in the sick-room. It is slightly nutritive, owing to its containing a small portion of gluten, in conjunction with fecula and sugar. It is one of the oldest\* and one of the best diluent demulcents ; diluting at the same time that it softens the acrimony of the secreted juices of the stomach, in febrile diseases.

b. *Gruel*, whether made of groats or of oatmeal, is less mild and demulcent than barley water ; and it is more likely to undergo the acetous fermentation in the heat of the stomach ; a circumstance which is greatly favoured by the sugar and butter which is sometimes added to it. Unless gruel be very thin, it can scarcely be regarded as a diluent ; and when thick, it is too heating an aliment for patients labouring under febrile symptoms.

c. *Tea*, in the form in which it is usually taken, is too stimulant and astringent to be a good diluent ; and, when it is strong, the narcotic property which it possesses renders it improper for most invalids, whatever may be the nature of their diseases. As it is, nevertheless, agreeable to most palates, and very refreshing, it may be taken in moderate quantity, provided it be not strong, without any hazard ; but it should not be taken soon after a meal, in cases where the stomach is weak ; as it retards digestion, and causes a sensation of fulness. In febrile cases, a cup of black tea, with the usual additions of sugar and milk, poured into a tumbler of cold water forms a most agreeable and refreshing beverage. Green tea is extremely apt to cause wakefulness and nervous feelings in many persons, especially in those labouring under diseases of diminished excitement ; indeed, under any circumstances, it is scarcely fitted for the sick-room.

*Sage, balm, and mint teas*, are often substituted for common tea. Each of them undoubtedly allays the irritability of the stomach in some cases ; but, as general beverages in disease, they are less useful than toast water. *Raspberry vinegar, lemonade, tamarind tea, apple tea*, and similar compound diluents, should never be administered without the consent of the physician. If a patient be taking an antimonial, they will excite vomiting ; if a mercurial, griping ; and they are equally incompatible with many

\* It was recommended by Hippocrates, who wrote an entire book on its use, and that of boiled barley, in acute diseases.

other medicines, and with many conditions of the stomach in disease. They are a description of beverage greatly recommended and largely distributed by the Lady Bountifuls in the country, and have frequently been productive of serious mischief.

*d. Coffee* is more heating, and, consequently, less admissible than tea; it may, however, be taken, if it be largely combined with milk. *Cocoa* and *chocolate* are still more objectionable than either tea or coffee in the sick-room.

I make no comment upon the use of *spirits*, nor of *punch*, nor of *wine*, nor of *white-wine whey*, as none of them ought ever to be administered in disease, except by the special order of the medical attendant: and this remark applies to *porter*, *ale*, and all other fermented liquors.

With respect to the number of meals, and the periods best adapted for taking them, it is scarcely requisite to remark, that, although in health, three moderate meals, at proper intervals, are customary, and well adapted for the support of the frame, yet, under the changed condition of the system in disease, it would be improper to take any regular number of meals, or to observe any stated periods for taking them: hence no general rules can apply; and the circumstances under which nutriment is requisite in disease, are as much within the province of the physician as the administration of medicines.

As a general rule, in the decline of diseases, and on the approach of convalescence, when the desire of taking food returns, the best time for the principal meal, *dinner*, is about two hours after noon. If the breakfast be taken at nine o'clock, and the evening meal at seven, the hour of two is the middle period of the day; so that, when dinner is taken at that time, the intervals between breakfast and dinner, and between dinner and supper, are not only equal, but neither is too short to limit the complete digestion of the previous meal; nor too long to injure the powers of the weakened stomach by protracted fasting. There is nothing more important than the regulation of diet in the decline of diseases; and nothing is more difficult to enforce, as the appetite, when it returns, generally becomes very sharp and importunate.

All acute diseases require more or less abstinence, especially when the object of the treatment is to lower the system; and in some chronic affections, abstinence is almost essential. If this be true, the necessity of the strictest observance of the directions of the physician on this subject must be obvious. It is one, however, which is not only neglected, but is often combated both by nurses and friends; and indulgences, which are sup-

posed to be of too trivial a nature to cause any injury to the sick, have often been followed by fatal effects. I have seen cases of convalescence from fevers suffer most severely from a single improper meal. In one instance, in which the relations of the patient were justly assured that all danger was at an end, a dinner of *bacon* and *beans* brought on symptoms which terminated fatally in twenty-four hours.

But, although abstinence be requisite during the existence of an acute disease, yet it is injurious when it is too rigidly maintained after convalescence is actually established; it often induces a new train of symptoms, not very unlike those for which it was properly prescribed, and the removal of which it has aided: namely, acceleration of the pulse, increased impetus of the heart, headache, and even delirium. As health returns, and the functions of the stomach are restored, the appetite for certain kinds of food is frequently the best guide which we can follow in the selection of that suited to the circumstances of the patient; but, before indulging it, the acquiescence of the physician should be obtained. It is, indeed, not more the duty of the physician to prescribe remedies for the cure of diseases, than to recommend that kind of diet which is the best suited for each individual case; nevertheless a few general rules in reference to the diet proper in certain classes of diseases, may prove highly servicable when a medical adviser is not at hand to direct it.

#### GENERAL DISEASES.

Happily, in *febrile affections*, the appetite of the invalid is not in a condition to desire food; and no stronger demonstration can be required of the impropriety of forcing it upon him under such circumstances. Simple fluids, such as diluents, are all that he desires, all that the stomach can bear; and such alone should be administered in fever, before that low condition of the system, which demands the use of wine or other stimulants, supervenes. In these cases, when the patient desires more nourishment than is usual, animal food ought not to be given, unless by the direct recommendation of the physician. Indeed, in general, the inclination of the invalid happily revolts from animal food, as much as experience condemns its administration. I have, nevertheless, seen strong animal broths forced upon patients labouring under fever, and have observed much mischief to follow.

While febrile symptoms are present, farinaceous matters, little nutritious, such as barley-water, gruel, arrow-root mucilage, or sago, acidulated with lemon-juice, and sweetened to the taste of

the patient, are most suitable; but even these should be given in small quantity, and at considerable intervals. The beverage generally most agreeable, and also most salutary, to those suffering under fever, is cold water: but a cup of tea poured into a tumbler of cold water is often preferred, and is unexceptionable. Ripe fruits are grateful; but they should be taken with caution. No solid matter should be ventured upon until the febrile symptoms have abated.

In *miliary* fever, the diet should be purely farinaceous, and somewhat acidulous.

In the decline of fevers even, as I have already remarked, although the severity respecting diet should be relaxed, yet much danger may result from mistaken kindness and over-zeal, in urging animal and stimulant food at too early a period of the convalescence. Indeed, the necessity of caution at this time is greater than during the continuance of the fever; and the more acute the disease has been, the greater must be the caution in the convalescence, especially if the treatment has been of an evacuant and lowering description. No error is greater than supposing that debility is always to be removed by nourishment and stimulant food, and wine or other exciting beverages; and this caution is more requisite in convalescence from acute than from chronic diseases. It is much safer to confine the diet, for some time, to vegetable matter only; and, in the early stage of convalescence, even that should be moderate in quantity: a rule still more requisite to be observed in the transition to a more substantial and stimulant diet.

The first change of diet, in the decline of fevers, should be to another article of the same kind of food which was allowed in the disease; for example, from simple *arrow-root mucilage* to *arrow-root and milk*, or to some other of the farinaceous compounds; whilst, at the same time, *asses' milk* may be given, in small quantity in the morning. *Rice*, one of the farinaceæ, is generally supposed to be astringent, but this is a mistake. It forms an excellent diet in all cases of early but decided convalescence. It should be well boiled, and mixed either with broth and beef-tea, or gravy which has been cooled, and the fat taken from it. In the transition to animal food, *beef-tea*, *chicken-broth*, and *mutton-broth*, and other liquid animal decoctions, should be first resorted to; then *white-fish*, simply cooked; for, although fish is more digestible than animal food, yet it affords much less stimulant nourishment; it is therefore better fitted for the early stage of convalescence. When convalescence is completed, a more generous diet is admissible.

With respect to beverage, *water*, *toast-water*, or *lemon-peel-water*, is sufficient, until the medical attendant declares that a little wine is requisite.

The nature of the wine, both when it is necessary during the progress of the disease, and in the convalescence, is of some importance. The kind and the quantity of wine, at both periods, is usually fixed by the physician; but when this has not been done, in convalescence from fever, it may be assumed that sherry and sound claret are preferable to other wines. The quantity for adults may range from half a pint to a pint, diluted with water, according to the degree of debility. The age of the patient, however, and his previous habits, must be taken into account, in determining both the quality and the quantity of the wine. Young persons are more easily excited by wine, and they rally more rapidly from the exhaustion of fever, than adults; consequently they require less wine in proportion; and its use may be sooner discontinued. Claret is the best wine for the young. Those who daily take from a pint to a bottle of port wine, when in health require more wine than the temperate, both during the fever and in convalescence. The use of the wine must be gradually withdrawn as the health becomes confirmed.

In convalescence from *fever*, it is an error to permit the patient to get up too soon. He should not leave his bed until his strength be considerably advanced. No danger can result from too strict an observance of this rule; whereas much risk may be incurred by its neglect. Injury has also often arisen from convalescents venturing out too early, during the cold weather of winter and spring. It has been truly remarked "that many persons, who have struggled through a most dangerous fever, have, from imprudent exposure to cold, been seized with intense inflammation in some organ, which has rapidly destroyed life."\*

If the head has been much affected, every mental exertion should be refrained from during the convalescence; and, according to the degree of suffering in any local organ, precautions must be taken to guard that part of the frame against a fresh attack of disease.

*Eruptive fevers* require more precaution in convalescence than general fevers, both as regards diet and exposure to sudden alterations of heat and cold. This is more especially essential after measles and scarlet fever.

*Measles* are often followed by a distressing cough, and other symptoms of pulmonary inflammation; or by a harassing diarrhœa,

\* Cyclopædia of Practical Medicine, Art. *Fever*.



which wears down the strength; or by inflamed eyes, catarrh, or obstinate toothache. In infants, *canker of the mouth* occasionally makes its attack and proves fatal. All these affections, after measles, might generally be prevented by taking care not to allow too soon a return to the use of animal food, or too early an exposure to cold or to night air. Even in summer, flannel should be worn next the skin for some weeks after the disease has disappeared.

*Scarlatina* is frequently followed by dropsical symptoms; which, however, might generally be avoided by the same attention to diet and regimen as after measles. Attention to the state of the bowels is also essential; and the least deviation from their natural action should be reported to the physician. The first appearance of dropsy should be reported to the physician.

*Small-Pox*, when severe, and especially when confluent, is very apt to awaken into activity the dormant seeds of scrofula, if any hereditary taint exists in the constitution: hence abscesses, ulcers, and swelled glands, make their appearance. These demand the aid of the physician or the surgeon. But if the convalescent be properly dieted, and recourse be had to a change of air as soon as his strength will permit, these evils may be avoided. The diet should be nutritive, but not stimulant; namely, milk, poultry, and mutton plainly cooked, with a moderate quantity of well-boiled vegetables.

*Erysipelas* not unfrequently attacks convalescents from small-pox and other eruptive fevers. It should never be entrusted to domestic management. When it occurs, independent of any prior disease, the same attention to diet and regimen is requisite as in other eruptive fevers.

The necessity of attention to diet, as a preventive of *scrofulous* affections, is so well understood that it scarcely requires to be noticed. It should be simple and nutritious, consisting of a larger quantity of animal food in childhood than would otherwise be required; and the cookery should be of the plainest description. Every kind of pastry and confections are highly injurious. For scrofulous children who have been lately weaned, milk, in which suet has been boiled, has been found useful.

In convalescence from attacks of *scrofula* in any of its forms, the diet should be the same as that required to ward off the disease; but the quantity should be circumscribed, and considerably below the demand of the appetite.

*Convulsions*, it is well known, are not unfrequently the result of errors in diet, in individuals with an irritable condition of the stomach and bowels. Advice should always be demanded respect-



ing the diet of those who are liable to, and who suffer from, convulsions; but it must not be supposed that, when they occur in children and have been subdued, a system of starvation is necessary to prevent their recurrence. As far as regards convalescence in such cases, it will be proper to bear in recollection the following rules. 1. When the patient is of a *full habit*, has a short neck, and a tendency to diseases of the head, the diet should be spare. The use of animal food, indeed, in such a habit, should be *wholly* prohibited in childhood, and very sparingly employed by adults; whilst vegetables, farinaceous matters, milk, and weak broths, may be allowed.

2. When the habit of body is *spare*, and when languor and chilliness are present, the diet, although free from stimulus, yet should be nourishing, and consist of the lighter kinds of animal food; namely, poultry and fish, with a moderate share of vegetable matters. 3. Under all circumstances, and at every period of life, fermented liquors and wine should be either wholly avoided, or very sparingly used, in almost all convulsive diseases connected with affections of the head.

In convalescence from some varieties of convulsive diseases, the nature of the diet must depend on circumstances which cannot be judged of by the attendants of the sick-room: hence it should be referred solely to the medical attendant. In *St. Vitus's Dance* (chorea), for example, although a tonic plan of treatment may have been successfully pursued, yet the diet may be required to be mild, and wholly free from stimulus. No plan of diet, therefore, even when the convalescence is fairly established, should be determined upon without the advice of the medical attendant. The same precautions are proper to be observed in *Epilepsy*. As a general rule, an abstinence from animal food is, in every case, more or less necessary; the rule is absolute with respect to fermented liquors, and wine and spirits. Whatever may be the nature of the diet prescribed, moderation also as to quantity is essential. The necessity for urging attention to this precaution is rendered greater, indeed, from the disposition of most epileptics to exceed in this particular: nevertheless, no part of the injunctions of the physician are so seldom strictly complied with as those relating to diet. "If this cannot be accomplished," says Dr. Cheyne, in an excellent essay on this disease, "it would be well that the physician at once should decline the care of an epileptic patient."

Attention to diet in *Hysteria* is most important. When the disease is connected with indigestion, the meals should be moderate; and rest in the horizontal posture should be indulged for an

hour afterwards, and then moderate exercise taken. Fluid food, such as broths and gruel, are improper; yet animal food should be eaten only once a day. Tea and coffee should be very sparingly taken; and the simplest beverages, even water and toast-water, should be taken in great moderation after a meal, and should not be drunk during dinner. In delicate habits, a glass or two glasses of good Sherry wine, or a *small* quantity of brandy and water, may be taken after dinner. Malt liquor seldom agrees with hysterical habits.

In convalescence from hysteria, change of scene and air are absolutely requisite. The mind should be directed to solid studies, and everything which can cherish morbid sensibility of the nervous system avoided.

In every disease of an *inflammatory nature*, the strictest injunctions of the physician should be observed; for much depends on the acute or the chronic character of the inflammation, the period of its progress, and the probable termination of the attack. When the inflammation is acute, complete abstinence, or at most a very scanty allowance of the mildest farinaceous diet, may be requisite; whilst, should it be chronic or sub-acute, not only more nourishment, but even a liberal supply, may be allowable. Should it terminate in suppuration, in delicate habits, it may be necessary to prescribe both a nutritive diet and wine: but the physician or the surgeon only can determine these points; and the attendants of the invalid are responsible for strictly carrying into effect his orders. There are diseases in which the desire of the patient for food is not to be restrained, nor his inclination with respect to its quality to be opposed; but inflammatory affections are not of that class.

*Dropsy.*—An opinion was long maintained that fluids are to be withheld from *dropsical* patients. No opinion was ever founded on more erroneous principles. Dropsical patients, indeed, should be allowed the free use of fluids. With respect to diet, it should, generally speaking, be light and unstimulating: but much depends on the causes of the dropsy. There is, however, less necessity for a rigid adherence to low diet in this than in other inflammatory affections.

In *Palsy*, abstinence from all stimulating food, solid or fluid, must be rigidly observed; and the restriction should not be discontinued in convalescence. At the same time, change of air and of scene is always of decided advantage. In every instance, an easy state of mind, and freedom from every source of irritation, as well as from the anxieties of business, are indispensable. The confinement of the palsy to any particular set of organs does not

alter the necessity for these general cautions; but when exercise cannot be taken, owing to the lower limbs being affected, friction along the spine may be advantageously substituted for it.

*Gout and Rheumatism.*—In no diseases affecting the general habit are abstinence and repose more essential during the attacks than in the two which head this paragraph, when they assume an acute form. When they occur in weakened or in broken-down habits, it is too often supposed that the opposite plan of diet is to be pursued, and that stimulating food and a liberal supply of wine should be indulged; but nothing is more likely to prove injurious. As medical aid should always be obtained whenever either disease makes its appearance, it is not my intention to aid, in any degree, the domestic or empirical management of them during the attacks; and I have nothing to add to what has been already detailed. The absurdity of the opinion that these who have frequently suffered from gout or from rheumatism should be able to manage themselves is too obvious to require refutation. An old gouty patient, who thought he knew his own constitution well, mentioned to the physician the common adage, that “he ought to be able to cure himself, as every man above forty is either a fool or a physician.” The Doctor calmly replied, “Be assured, sir, you are no physician.”

When the paroxysm subsides, it is too customary to permit the invalid to glide into his usual habits with respect to diet and regimen; consequently the plethora which originated the disease gradually returns; and, the same plan being continued, paroxysm follows after paroxysm, at shortening intervals, until scarcely any interval occurs; and life is sacrificed on the altar of self-indulgence.

For some weeks after the paroxysm of gout has subsided, in a young or a middle-aged man, animal food should be sparingly taken, and fermented liquors altogether avoided. The idea of debility is the bugbear which the convalescent is most afraid of; and, to keep the gout from the stomach, wine is resorted to; and a supply of nutritive food, which oppresses the digestive organs and induces indirect debility, more hurtful than that which this erroneous plan of treating convalescence is intended to obviate, is indulged. There is an aversion in gouty or rheumatic subjects to be convinced of the truth of this doctrine; and the physician who would endeavour to enforce its observance, if he depend for his subsistence on the favour of the public, would have little chance of having an attack of gout himself from over-nutrition. Exercise, as far as the strength can bear it, is as essential as moderation in diet; and it should be taken on foot. No method of ma-

nagement is so likely to keep within bounds the nutrient, and to favour the excretory, functions. The organs of the body are thus brought back to their natural and healthy condition, and maintained in it by the strict observance of the same plan, after all feelings of disease have disappeared. If due exercise be daily taken, with or without the use of the shower-bath and friction, the bowels will require no artificial assistance; and the skin will be preserved in that condition which is the accompaniment and the safeguard of health. If these rules be necessary after an attack of gout, in one not hereditarily predisposed to the disease, it requires no arguments to prove that their observance is much more essential in those to whom gout has descended as a patrimonial inheritance.

When gout has become habitual, invalids often despair of relief; and, regarding their cases as desperate, endeavour to keep up the *vis vitæ*, the constitutional energy, by recourse to artificial stimulants, such as brandy-and-water; and, when pain recurs, to allay it with a full dose of colchicum. But it should be known that such a plan is like throwing tar-barrels into a burning house; and that the opposite plan, if it cannot cure a disease of long standing, is likely to mitigate the attacks, to lengthen the intervals, and to ward off disorganizations, which can never be cured.

As the open state of the skin is essential for restoring health after an attack of gout, the tepid shower-bath or the vapour-bath proves highly serviceable in the management of the convalescence. Either should be used in the early part of the day, and brisk exercise taken afterwards in the open air; or, when the weather is unfavourable, friction with hair-gloves should be employed.

No doctrine is worse founded than that with which gouty patients often console themselves:—"Well, if we occasionally suffer, gout keeps off other diseases!" On the contrary, gout weakens the constitution, and renders it susceptible to many other diseases which rarely attack a healthy person: nevertheless, there can be no doubt that the gouty paroxysm is intended to relieve a surcharged state of the system.

*Morbid corpulency* generally originates in causes closely allied to those which occasion gout. This condition must not be confounded with that extraordinary natural obesity or fatness which occurs in some individuals, and which is neither inconsistent with health nor strength. As illustrative of this fact, I may notice the case of a German girl, mentioned by Mr. Wadd, in his work on Corpulency, who weighed 150 lbs. at four years of age, and 450 at twenty. Her physical strength was so uncommon, that, at six years old, she could carry her mother; and, when she attained to

twenty years of age, she thought nothing of carrying 250 lbs. in each hand. Her arms measured eighteen inches in circumference, and the rest of the body was in proportion. She ate little, but drank a great deal. She was healthy, vigorous, and active; had all the attributes of womanhood at nine years of age; and suffered from nothing except shortness of breath on ascending a stair or any height.

Without alluding farther to such extraordinary growths, we find a cause of *morbid* fatness in that kind of excess of all the nutritive functions which may be regarded as an excess of health, if such an expression be admissible; but which, by the deposition of fat loading the organs and impeding their functions, passes into a state of disease consisting of defective strength, torpid bowels, a slow, languid pulse, a white, pasty condition of the surface, a low condition of the irritability of the frame, and somnolency. As this is usually the result of good living and indolence, it might be supposed that nothing is necessary to remedy the evil, except abstinence and activity. But, although these are the best preventives of over-fatness, yet, when it really amounts to disease, medical treatment is as essential as in a fever or a dropsy. When it is fortunately removed, the return to anything approaching to generous living should be very gradual: much fluid should be sedulously avoided; active exercise, even violent, must be taken daily in the open air; and the quantity of sleep restricted to four or at the most six hours in twenty-four hours. I may here mention that the idea of reducing obesity by bleeding and purging is founded on mistaken principles: fat people do not bear the former well, and they suffer from lowness to a degree which could not be anticipated from the latter. Its reduction, however, may be aided by the daily use of cream of tartar beverage.

*Chlorosis, Green Sickness*, is a state of the habit which seems to depend on an impaired condition of the blood itself. Its treatment is well understood, and recourse to medical advice should never be neglected; otherwise it may terminate either in mental derangement or in sudden death. In convalescence from it, the diet should be mild and light, but nutritious; the exercise should be much within the limits of fatigue, and consist of both walking and horse exercise, daily, in the open air: the body, more especially the lower extremities, should be warmly clothed: the mind ought to be amused; all sedentary occupations thrown aside; and confidence placed in the honour of the physician, who should be made the repository of any mental anxiety, especially connected with the tender passion, which may be preying upon the vital energy of the body.



Men are occasionally liable to the disease, or at least to a malady closely resembling it: and, although almost as rarely, yet it sometimes occurs to married women. In these cases, the same plan of treatment, and a similar management of the convalescence are requisite, as in delicate single women, or in young girls.

#### AFFECTIONS OF THE HEAD.

Whatever may be the cause of *Apoplexy*, no disease requires more prompt and energetic treatment: the alarming nature of the symptoms is always sufficient to prevent any time from being lost by attempts to relieve the sufferer without medical assistance. Should the attack not prove fatal at the time, and should it not be followed by palsy, still the utmost caution is requisite to prevent a recurrence of the disease. It is scarcely necessary to insist on the strictest adherence to temperance, both as to meat and to drink; and the importance of daily exercise, when the attack is over; and indeed for the remainder of life. Prolonged study and intense thinking must be given up; the violent and exciting passions should be subdued; and even the pleasurable moderated. If the invalid previous to the attack was engaged in any occupation likely to impede the circulation of the blood in the brain, by obstructing its return to the heart, it should be given up; and if he has been a fluteplayer, that accomplishment must also be foregone, as the voluntary suspension of breathing after a full inspiration is likely to bring on another attack. Much sleep, also, must be avoided.

*Inflammation of the brain* is one of those diseases which require, as observed respecting *Apoplexy*, the most energetic treatment. When convalescence has fortunately been established, the attention of the physician is still requisite, during several weeks, until complete recovery be fully confirmed; for the brain, after suffering from inflammation, is very apt to relapse into the same state, from the excitement of too full a meal, or over-exercise, or even slight mental exertions or emotions. On this account, the convalescent must be kept perfectly quiet, and completely free from the smallest excitement; and the strictest regimen observed. His diet should not only be mild and unstimulating, but small in quantity; for, although circumstances may exist, during the progress of the disease, which require that the strength of the invalid should be kept up, and even cordials administered, yet, all these cease when convalescence takes place. The dread of debility must altogether be set aside: and the renewal of strength left to



the natural efforts of the constitution, as they gradually regain their powers.

In inflammation of the brain in children (see *Water in the Brain*,) the convalescence is slow. During its progress, the most unremitting attention is required to the condition of the bowels; for which purpose, the alvine evacuations should be daily inspected, and the least deviation from their natural state immediately mentioned to the medical attendant of the family. The diet, in the early or active stage of the disease, should be strictly such as conveys little or no nourishment into the system, but when the disease has run its course, and convalescence has happily commenced, the farinacea may be changed for beef-tea, asses' milk, and cow's milk, lightened by means of a small addition of sugar.

*Inflammation of the eyes* requires the same caution when convalescence is secured as other inflammatory affections; namely, quiet, great moderation in diet, and avoiding exposure either to much light, heat, or cold, or whatever can stimulate the still highly excitable organ. When the disease assumes that virulent form which is termed *purulent ophthalmia*, the reasons for the necessity of a regulated temperature and free ventilation, generally enforced by the surgeon or physician, should be known to the attendants of the sick-room. Experience has proved that the enclosure of the bed-curtains, and immuring the invalid in a close, dark room, are always productive of the most pernicious effects. Fresh air and moderate light are essential in such cases; and, in fine weather, the patient should take exercise out of doors. The diet may be more generous than in simple inflammation of the eye.

When *purulent ophthalmia* occurs in infants at the breast, the intervals between the times of suckling should be lengthened; and when the breast cannot be withheld without causing much irritation to the infant, a gentle emetic should be occasionally administered, to unload the stomach. The best emetic for this purpose is the wine of ipecacuanha, which may be given in doses of a teaspoonful at intervals of fifteen minutes, until vomiting be produced. The eye requires much less clearing than is generally supposed: indeed, the purulent discharge forms a natural protection against the acrimony of the tears.

#### AFFECTIONS OF THE CHEST.

When convalescence is confirmed after inflammation of the upper part of the windpipe (*Laryngitis*), the invalid should for some time be confined to an atmosphere not exceeding 60° F.; he

should avoid east and northeast winds, and evening air. The diet should be light, unstimulating, and moderate in quantity.

*Croup*.—It is scarcely necessary to say, that, in this disease of the mucous membrane, extending, however, beyond the windpipe into the breathing or bronchial tubes, the same precautions with regard to temperature and diet are essential as in inflammation of the windpipe. In both diseases, if the health remains impaired, and the strength is not restored, a change of air has been found very serviceable. The new situation should be low, and sheltered from the east, the north, and the northeast winds.

*Common cold*.—This inflammatory affection of the mucous membrane (*Bronchitis*, or *Catarrh*) sometimes assumes a low form, and leaves a much greater degree of weakness than the high inflammatory form of disease which constitutes Croup. In this case, a teasing, irritable cough remains, which rarely disappears until change of air is obtained. The same diet and regimen are requisite as in the chronic form of the disease.

In chronic inflammation of the lining or mucous membrane of the air passages in the lungs (*Chronic Bronchitis* or *Catarrh*), if the invalid cannot leave home, he should be confined to an apartment regulated to the temperature of 60°; and, during easterly winds, which are dry and irritating, the vapour of warm water should be diffused through the room, so as to soften the air as it enters the inflamed pulmonary tubes. The diet should be mild; but a total abstinence from animal food is not essential. Sudden transitions of temperature should be avoided, long after the convalescence is complete; and the surface should be kept uniformly warm, by a flannel shirt next the skin, and flannel drawers. The removal to a warm climate is often requisite after both forms of the disease; but, when circumstances prevent such a measure, the invalid should at all events change the air. The change to the distance of only a few miles often proves beneficial.

*Inflammation of the Lungs (Pneumonia)*.—In convalescence from this disease, the temperature of the room in which the patient sits should not exceed 60° F.; and it should be free from currents of air; but, at the same time, it should not be close. The necessity for continuing the same elevated position of the shoulders when in bed, which is demanded during the existence of the disease, remains even when the convalescence is advanced. The patient should be prevented from much talking, and from exerting any muscular motion that can accelerate the circulation. The diet should be of that description which will support the strength without exciting or producing repletion. As the convalescence advances, and exercise is permitted by the medical atten-

dant, it should be regular, but not hurried nor violent; and evening air should be sedulously avoided.

When, in spite of these precautions, health does not completely return—but slight relapses recur as the weather becomes colder, or when north or easterly winds prevail—then a change to a mild climate for the winter season must be resorted to: and, when the invalid cannot go to Italy or to Madeira, no situation is so well adapted to such cases as the Cove of Cork.

*Pleurisy.*—Inflammation of the lining membrane of the chest requires the same attention to diet and regimen during convalescence as the last-mentioned disease, except that a greater strictness with regard to abstinence in food is requisite; the least deviation being likely to bring on a renewal of the inflammation. When the disease assumes a chronic character, and when the object is to remove fluid effused into the cavity of the chest, and pressing upon the lungs so as to circumscribe their action, the same degree of strictness with respect to diet is not necessary; but, as in this condition of the habit the physician must continue his attendance, the regulation of the diet devolves upon him.

*Angina.*—In that condition of the habit, which is connected with a predisposition to gout, but in which, instead of a regular paroxysm, the heart and the pulmonary organs become affected, and the disease assumes that form which has been denominated diaphragmatic gout (*Angina pectoris*), the regulation of diet is of vital importance; and it should be of as low a standard as the constitutional powers will admit. It should not be of a description either to nourish much, or to augment or to cause fulness of habit: mild animal food, in moderate quantity, may be allowed; but the staple should be of a farinaceous kind; every stimulant, whether solid or fluid, should be avoided; and wine and malt liquors regarded as poisons. The invalid himself should be made aware, that whatever tends to excite or to hurry the circulation is calculated to bring on a paroxysm; nor is it sufficient that he avoids all stimulating viands and beverages; he should also be instructed that the same deleterious effects are likely to follow a full meal, even of the most proper and the mildest food.

The same attention to diet, both as regards quantity and quality, is essential in *palpitations* depending on organic disease of the heart.

In no affection of the chest is attention to diet so important as in *asthma*. Sir John Floyer, who himself suffered from the disease, recommends almost a degree of abstinence; which is correct in reference to quantity; but the diet, although of a light, yet should be of a solid, kind. This is especially necessary, when

dyspepsia is present to aggravate and excite the disease of the lungs.

In *Whooping-cough*, the diet, whether the patient be an adult or a child, should be of the mildest description; and, perhaps, no nutriment is so well adapted to support the tone of the body, without exciting it, as milk. In infancy, nothing but the breast should be given; the system of the nurse, at the same time, being kept as cool as possible by mild diet, and her mind in a tranquil state. If convulsions occur, these sometimes depend on the nature of the milk; in which case the nurse should be changed. It is still customary with non-professional persons to consider change of air essential in whooping-cough; but it is only after the malady has run its course, and convalescence is progressing, when the cough remains as a habit, that change of air is really beneficial. It is unnecessary to combat the absurd opinion, that a change even to a worse air is salutary.

#### AFFECTIONS OF THE STOMACH AND BOWELS.

Although *acute inflammation of the stomach* rarely occurs, yet there is a chronic form of that disease, in which, during its actual existence, and also in convalescence from it, much of the safety of the invalid depends upon domestic management. Every source of excitement should be avoided; the sick-room should be airy, and its temperature that of summer. The food should be of the blandest kind, given cold, or iced, and in small quantity; even when the convalescence is established, the diet should consist of farinaceous matters, mixed with small quantities of beef-tea, or weak broths; and this severe diet should be persisted in for a considerable time after recovery.

*Enteritis*.—When inflammatory action extends to, or exclusively exists in, the mucous lining of the bowels, constituting this disease, the diet, during the early stage of it, should be confined to cold water, or iced almond-emulsion; after which, milk and barley-water, or weak chicken or veal-tea, may be given in small quantities; namely, two or three tablespoonfuls, at intervals of three or four hours. Nothing stronger should be ventured upon, unless expressly ordered by the medical attendant.

*Atonic dyspepsia, or simple indigestion*.—During the attack, abstinence, to a certain degree, is necessary; but, if this is not essential, the diet should be somewhat stimulant, but simple; namely, a small cup of moderately strong coffee, with little sugar or milk; or beef-tea, with a small quantity of dry toast; and, as the stomach begins to retain its tone, a little animal food of easy

digestion, such as mutton or poultry. More powerful excitants, in the form of condiments, as Cayenne pepper, mustard, or high-flavoured dishes, must be avoided. All condiments, indeed, except salt, are hurtful; and, unless the person has been accustomed to the use of wine, neither it nor brandy-and-water should be taken. If the tongue be moist and clean, this restriction may be relaxed; but not whilst it remains dry or furred.

During the intervals of the paroxysms of indigestion, attention to diet is of the first importance. As a general rule, the patient should be confined to a spare animal diet, with a moderate share of *well-boiled* vegetables, and a considerable restriction with respect to the use of fluids. Coffee, with little milk and sugar, is preferable to tea for breakfast: the bread should be stale or toasted, with a little fresh butter; but its quantity should be limited. In delicate habits, a small portion of light animal food is allowable; or a new-laid egg, lightly boiled, may be occasionally taken. For dinner, mutton, venison, poultry, and winged game, are to be preferred; they should be roasted rather than boiled; and should never be dressed a second time. Fat meat; gelatinous meat, such as that of the young pig, lamb, and veal; salted or smoked meats, sausages; strong concentrated soup, mushrooms, truffles, and morels; fish, especially the coloured, as salmon, mackerel, and herrings; fish sauces, and melted butter, should be avoided.

The best vegetables are young Brussels sprouts, cauliflower, asparagus, young peas, French beans, and very mealy potatoes. Among hurtful vegetables may be mentioned beans, old peas, waxy potatoes, Jerusalem artichokes, and cucumbers. Rice is an excellent substitute for fresh vegetables; but all pultaceous matters, pastry of every kind, dumplings, new bread, custards, creams, and cheese are hurtful. Fruits should not be eaten after dinner, but in the early part of the day, and then in great moderation. The least injurious are strawberries, the mulberry, a ripe, juicy peach or nectarine, an orange, if very ripe, and grapes. The injurious are figs, whether dried or fresh; currants, gooseberries, apples, plums, cherries, apricots, melons, nuts, of all kinds, and almonds, unless they are well masticated. Any fluid, and the best is sherry-and-water, should be taken after the meal is finished, not during the intervals of eating. All sweet wines, ale, and mucilaginous and acid fluids, should be scrupulously avoided.

When indigestion is attended with pain, or that condition of the stomach which indicates a very irritable and sensitive state of its internal membrane, the diet must be suited to the sensibility of the organ, as well as to the wants of the system. The food



should be of such a nature as to require the least action of the stomach for its digestion, and so soluble as to leave as little as possible behind it to act as a mechanical irritant. It should be partly animal, partly farinaceous, neither too fluid nor too dry; and the avoidance of those substances enumerated as injurious in simple indigestion must be carefully observed.

Milk in all its modifications of preparation, either in its natural state, in conjunction with farinaceous matters, or coagulated as uncompressed curd, is the best diet in this form of dyspepsia, when it is severe. In milder cases, plain soups, well-boiled, tender vegetables, and mutton or poultry, are admissible. Sherry, hock, sound claret, weak brandy-and-water, alternated with good porter, in moderate quantity, are proper articles of beverage. The quantity of food should be small, not more than a few spoonfuls at once, and frequently repeated; and the greatest care observed to masticate the food well.

When the condition of the stomach is that which is accompanied with cramp, and vomiting of glairy, viscid phlegm in the morning, especially in people somewhat advanced in life, and young persons of a cold, phlegmatic temperament, the diet should be of a dry kind, and consist chiefly of the lean of mutton and poultry, and vegetables sparingly eaten. Fish, milk, cheese, eggs, and fruit, should be avoided, and the quantity of bread limited. The meat should be thoroughly cooked, and always eaten hot: but it is less hurtful in a cold state than when twice cooked. With regard to beverage, coffee is preferable to tea for breakfast, dry wines, such as sherry or hock, or brandy-and-water, in moderation, are allowable; but malt liquors, especially ales, are decidedly hurtful; indeed, they are often the exciting cause of the malady.

When the practitioner in attendance declares the disease to be seated in the first gut or *duodenum*, the meal, whatever it may be, should be within the range of the powers of the stomach; that is, it should not be sufficient to satisfy the appetite. It should be eaten slowly, well masticated, and with the mind completely disengaged. The same kind of food as in the last case should be selected; and, with respect to beverage, malt liquors are equally objectionable.

The proper application of a flannel-roller around the trunk of the body, in addition to the warm bath or fomentations, or other medicinal means, has been productive not only of great comfort to the invalid, but displayed the most important influence in forwarding recovery.

In adult cases, when the skin is cool, the countenance sunk, and the teeth are covered with a dark-coloured fur, and the stools



are passed involuntarily, a little diluted wine, or white-wine whey should be given; but it should be under the control of the medical attendant. In order to allay thirst, in the early stage of the disease, nothing is more grateful and salutary than small pieces of washed ice, taken into the mouth, and permitted to dissolve slowly: it has never, as far as the author's experience extends, been productive of deleterious consequences.

*Dysentery*, which implies inflammation, acute or chronic, of the same membrane as in *enteritis*, but confined to the larger and lower bowels, requires the diet to consist of the mildest farinaceous matters, strictly avoiding all solid animal food. It should be given in small quantity at a time, and the whole allowance for the day should be moderate. The farinaceous food should not be either solid, nor yet altogether fluid; the former may prove injurious as a mechanical irritant; the latter is apt to excite griping, from the extrication of much flatus. Besides fomentations, and other means likely to be prescribed by the physician, swathing the abdomen with a flannel roller, not applied so tight as to cause pain or uneasiness, is useful, both in affording support and for preserving the temperature uniform.

*Diarrhœa*.—Much of the domestic, as well as the medical management of diarrhœa depends on the nature of the attack, and its causes; but too much attention cannot be paid to the regulation of the diet. It should be both small in quantity, and mild in quality. In the early stage, and the acute form of the disease, barley-water, arrow-root, made with water, rice or grit gruel, and light broths, are proper. In chronic diarrhœa, rice properly boiled, and mixed with a small quantity of beef-tea, forms an excellent diet, as it nourishes moderately, and leaves scarcely any feculent matter behind it. After a few days, if the diarrhœa be of an acute kind, a small morsel of chicken or game, or of mutton, may be added; but it should be at first given only in the form of panada; and afterwards roasted, removing the skin before it is eaten. Calves-foot jelly is more irritating to the bowels, and much less nutritive than solid meat. Fish is still more irritating, owing to the large quantity of undissolved excrementitious matter which it leaves in the bowels.

In *cholera*, convalescence is often tedious; and nothing is so likely to cause relapse as even slight irregularities of diet. For weeks after the feverish symptoms have disappeared, the diet should consist of a very moderate quantity of vegetable matter only. The feet should be kept especially warm, and the whole body clothed in flannel, to prevent that irregular distribution of blood which so strongly characterizes the disease.

After inflammation of the lining membrane of the cavity of the belly (*peritonitis*) has been subdued, the invalid should still observe the strictest diet and regimen. He should return very gradually to the use of animal food and wine. The bowels should be moderately and daily opened, the feet kept warm, and the skin maintained in a healthy condition by wearing flannel next to it, for a very considerable time after every trace of the disease has disappeared.

*Diseases of the Liver.*—In all cases of recovery from these diseases, whether inflammatory or otherwise, every precaution should be taken to guard against the deleterious influence of alternations of temperature and also of damp, by clothing in flannel next the skin, and shunning exposure to a north or a northeast wind. The winter residence should be in a sheltered, mild situation; and, when expense is no obstacle, the patient should remove to a temperate climate for several successive winters. Errors in diet should be avoided; and fermented liquors and stimulating beverage of every kind, refrained from. When pains of the side continue, after all the other symptoms of the disease have disappeared, the introduction of a seton, if prescribed, should not be objected to; as the greatest benefit has often followed that mode of counter irritation.

## COOKERY FOR THE SICK-ROOM.

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THE cookery for the sick-room is confined to the processes of boiling, baking, and roasting; and it may be useful to offer a few remarks upon the principles which render these processes serviceable for the preparation of food. By cookery, alimentary substances undergo a twofold change—their principles are chemically modified, and their texture is mechanically changed. The extent and nature of these changes greatly depend on the manner in which heat has been applied to them.

1. *Boiling*.—Boiling softens the animal fibre, and the principles not properly soluble are rendered softer, more pulpy, and consequently easier of digestion. But, at the same time, the meat is deprived of some of its nutritive properties by the removal of some of its soluble constituents. Much depends, however, on the slow or rapid manner in which the operation is conducted. If the boiling be too quick, it coagulates the albuminous matter of the meat, renders the flesh hard, and consequently diminishes its digestibility. In boiling meat, the water should scarcely be brought to the boiling temperature, but it should be long kept at a lower than the boiling point of water, or in that state which approaches more to stewing than boiling. The nature of the water is also of some importance. Dr. Paris observes, that mutton boiled in hard water is more tender and juicy than when soft water is used; while vegetables, on the contrary, are rendered harder and less digestible when boiled in hard water. Even in boiling vegetables the operation may be carried to an injurious extent. Thus, potatoes are frequently boiled to the state of a dry, insipid powder, instead of being preserved in that state in which the parts of which they are composed are rendered soft and gela-

tinous, so as to retain their shape and yet be very easily separated. On the other side, the cabbage tribe are frequently not boiled long enough, and vegetables too little boiled prove highly injurious.

2. *Baking*.—Except in the preparation of light puddings, the process of baking is inadmissible for the sick.

3. *Roasting*.—Roasting softens the tendinous part of meat better than boiling, and it retains more of its nutritious principles. Care should always be taken that the meat be neither *over* nor *under-done*; for, although in the latter state it may contain more nutriment, yet it will be less digestible on account of the density of its texture. It has of late years been much the fashion to regard under-done roasted meat as being well-adapted for weak stomachs, but no opinion is more erroneous.

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## ANIMAL PREPARATIONS.

### BEEF TEA.

Take half a pound of good rump steak; cut it into thin slices, and spread these in a hollow dish; sprinkle a little salt over them; pour upon the whole a pint of boiling water. Having done this, cover the dish with a plate, and place it near the fire for an hour; then throw the sliced beef and water into a pan, cover it, and boil for fifteen minutes. After which, strain through a sieve, so as to separate the tea from the meat. The quantity of water directed to be used is too little for the strength of the beef tea usually proper for invalids, but is sufficient to extract all the soluble matter of the beef, and the tea can, at any time, be reduced to the strength required by the addition of boiling water.

### CHICKEN TEA.

Take a small chicken, free it from the skin and from all the fat between the muscles; and having divided it longitudinally into halves, remove the whole of the lungs, and everything adhering to the back and the side bones; then cut it, bones and muscles, by means of a sharp knife, into as thin slices as possible, and having put these into a pan with a sufficient quantity of salt, pour over it a quart of boiling water, cover the pan, and boil with a slow fire for two hours. Put the pan upon the hob for half an hour, and then strain off the tea through a sieve.

Both of these animal decoctions are of a strength sufficient for any invalid whose condition admits of animal diet in its lightest

form. When concentrated with some farinaceous additions, and slightly spiced, they are equally useful in convalescence.

#### VEAL TEA.

This may be made in the same manner as beef tea, using a pound of fillet of veal, freed from fat and sliced, and a pint and a half of boiling water, and boiling for half an hour, instead of fifteen minutes. It may also be made with the same quantity of the fleshy part of the knuckle of veal; and by boiling down the knuckle of veal tea (whilst the meat is in it) to one half, and straining, the tea gelatinizes; when it is poured into small cups it will keep good for several days. By adding an equal quantity or more of boiling water to a cupful of this jelly, a moderate quantity of veal tea for one individual may be prepared in two minutes.

#### MUTTON BROTH.

This is prepared from a pound of good mutton, freed from fat and cut into slices, and a pint and a half of soft water, in the same manner as beef tea; but it requires to be boiled, after the maceration, for half an hour, before it is strained through a sieve.

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### PREPARATION OF BEVERAGES.

#### RENNET WHEY.

Infuse a moderate-sized piece of rennet in a sufficient quantity of boiling water, to abstract all the soluble matter; separate the fluid, and stir a tablespoonful of it into three pints of milk; cover up the mixture with a clean cloth; place it before the fire till it forms a uniform curd; divide this curd with a spoon, and pressing it gently, separate the whey. Good whey should be nearly transparent, of a pale yellow colour, and should have a sweetish taste. It constitutes ninety-two parts in one hundred of milk, and, besides water, contains sugar of milk and some salt. It is an excellent diluent in febrile affections.

#### MUSTARD WHEY.

Take half an ounce of bruised mustard seed and a pint of milk, boil them together till the milk is curdled, and strain, to separate the whey. This whey has been found to be a useful drink in

dropsy; it stimulates the kidneys, and augments the urinary secretion. It may be taken a teacupful at a time.

#### WHITE WINE WHEY.

Take two-thirds of a pint of good milk, dilute it with as much water as will make up a pint; take two glasses of sherry wine, or any other good white wine, and a dessertspoonful of Muscovado sugar; place the milk and the water together in a deep pan on the fire, and, watching the moment when it boils, which is known by the scum rising to the edge of the pan, pour into it the wine and the sugar, and stir assiduously whilst it continues to boil for twelve or fifteen minutes. Lastly, strain the whey through a sieve. This is an excellent mode of administering wine in small quantities in low fevers, and in cases which demand a moderate degree of excitement. It may be drunk either cold or tepid, a wine-glassful at a time.

#### ACID WHEY.

Cow's milk, deprived of the cream . . .	2 pounds.
Cream of tartar . . . . .	1 drachm.

After one boil let it be strained through bibulous paper. Coagulation may also be effected with two spoonfuls of vinegar or of lemon-juice.

#### ALUMINOUS WHEY.

Cow's milk, boiling . . . . .	1 pound.
Crude alum . . . . .	1 drachm.

When the milk has coagulated let the whole be strained.

#### ORANGE WHEY.

Take one pint of cow's milk, boil it, and let the juice of half or of an entire orange be digested in it, with a portion of the peel. When coagulation has taken place, let it be strained.

#### WHEY WITH BEER.

Cow's milk, boiling . . . . .	1 pound.
Good beer . . . . .	3 ounces.

Boil together until coagulation has taken place, and then strain.



## SWEET WHEY.

Take four pounds of cow's milk, deprived of the cream, and a piece of prepared calf's rennet; let them be put in a warm place until the caseine has coagulated, then separate the serum.

## WHEY WITH TAMARINDS.

Cow's Milk, boiling . . . . .	1 pound.
Tamarinds . . . . .	2 ounces.

Boil them together until coagulation has taken place.

## MILK AND SODA WATER.

Heat, nearly to boiling, a tea-cupful of milk; dissolve in it a teaspoonful of refined sugar; put it into a large tumbler, pour over it two-thirds of a bottle of soda water. This is an excellent mode of taking milk when the stomach is charged with acid, and consequently apt to feel oppressed by milk alone.

## BUTTERMILK.

When buttermilk is freshly churned it is a wholesome, delicious, and cooling beverage in fever or any disease of excitement; but as it cannot be procured in large towns, and not always in the country, the method of making it in small quantities daily should be understood. It is readily prepared by putting a quart of new milk into a bottle which will hold a gallon, corking the bottle, and covering it with a towel in such a manner that, by drawing alternately each end of the towel, the bottle can be rolled upon a table; this movement should be continued until all the butter is separated, which is known by its appearing in clots or masses swimming in it. During the rolling it is necessary to open the bottle occasionally to admit fresh air, as that is essential to the formation of the butter. When the process is finished, all the butter should be carefully separated from the buttermilk.

## IMPERIAL DRINK.

Pour a quart of boiling water upon a quarter of an ounce of cream of tartar, a few lemon and orange chips, and half an ounce of sugar-candy. Pour off the clear fluid when cold, and use for common drink when feverish, or when the urine is scanty.

## PANADA MADE IN FIVE MINUTES.

Set a little water on the fire with a glass of white wine, some

sugar, and a scrap of nutmeg and lemon-peel; meanwhile grate some crumbs of bread. The moment the mixture boils up, keeping it still on the fire, put the crumbs in, and let it boil as fast as it can. When at a proper thickness just to drink, take it off.

## ANOTHER.

Make as above, but instead of a glass of wine, put in a teaspoonful of rum, and a bit of butter; sugar as above. This is a very pleasant food.

## CHICKEN PANADA.

Boil it till about three parts ready in a quart of water, take off the skin, cut the white meat off when cold, and put into a marble mortar; pound it to a paste with a little of the water it was boiled in, season with a little salt, a grate of nutmeg, and the least bit of lemon-peel. Boil gently for a few minutes to the consistency you like; it should be such as you can drink, though tolerably thick. This conveys great nourishment in small compass.

## SIPPETS, WHEN THE STOMACH WILL NOT RECEIVE MEAT.

On an extremely hot plate put two or three sippets of bread, and pour over them some gravy from beef, mutton, or veal, if there be no butter in the dish. Sprinkle a little salt over.

## EGGS.

An egg broken into a cup of tea, or beaten and mixed with a basin of milk, makes a breakfast more supporting than tea solely.

An egg divided, and the yolk and white beaten separately, then mixed with a glass of wine, will afford two very wholesome draughts, and prove lighter than when taken together.

Eggs very little boiled or poached, taken in small quantity, convey much nourishment; the yolk only, when dressed, should be eaten by invalids.

## RESTORATIVE.

Bake two calves' feet in two pints of water, and the same quantity of new milk, in a jar close covered three hours and a half. When cold, remove the fat.

Whatever flavour is approved, give it by baking it in lemon-peel, cinnamon, or mace. Add sugar afterwards.

## SHANK JELLY.

Soak twelve shanks of mutton four hours, then brush and scour them very clean; lay them in a saucepan with three blades of mace, an onion, twenty Jamaica and thirty or forty black peppers, a bunch of sweet herbs, and a crust of bread made very brown by toasting. Pour three quarts of water to them, and set them on a hot hearth, close covered; let them simmer as gently as possible for five hours, then strain it off, and put it in a cold place.

This may have the addition of a pound of beef, if approved, for flavour. It is good in cases of debility.

## AN EXCELLENT JELLY.

Take rice, sago, pearl-barley, hartshorn shavings, each an ounce; simmer with three pints of water to one, and strain it. When cold it will be a jelly, of which give, dissolved in wine, milk, or broth, in change with other nourishment.

## ANOTHER.

Boil one ounce of isinglass shavings, forty Jamaica peppers, and a bit of brown crust of bread, in a quart of water to a pint, and strain it. This makes a pleasant jelly to keep in the house, of which a large spoonful may be taken in wine and water, milk, tea, or soup.

## CAUDLE.

Make a fine smooth gruel; strain it when boiled well; stir it at times till cold. When to be used, add sugar, wine, and lemon-peel, with nutmeg. Some persons like a spoonful of brandy besides the wine, others like lemon-juice.

## ANOTHER.

Into a pint of fine gruel, not thick, put, while it is boiling hot, the yolk of an egg beaten with sugar, and mixed with a large spoonful of cold water, a glass of wine and nutmeg. Mix by degrees. It is very agreeable and nourishing. Some like gruel with a glass of table beer, sugar, &c., with or without a teaspoonful of brandy.

## COLD CAUDLE.

Boil a quart of spring water; when cold add the yolk of an egg,

the juice of a small lemon, six spoonfuls of sweet wine, sugar to your taste, and syrup of lemons, one ounce.

#### A FLOUR CAUDLE.

Into five large spoonfuls of the purest water, rub smooth one dessertspoonful of fine flour. Set over the fire five tablespoonfuls of new milk, and put two bits of sugar into it: the moment it boils, pour into it the flour and water, and stir it over a slow fire twenty minutes. It is a nourishing and gentle astringent food, particularly for children who have weak bowels.

#### RICE CAUDLE.

When the water boils, pour into it some grated rice, mixed with a little cold water; when of a proper consistence, add sugar, lemon-peel, and cinnamon, and a glass of brandy to a quart. Boil all smooth.

#### TO MULL WINE.

Boil some spice in a little water till the flavour is gained, then add an equal quantity of port, Madeira, or sherry, some sugar and nutmeg: boil together, and serve with toast.

#### ANOTHER.

Boil a bit of cinnamon and some grated nutmeg a few minutes in a large teacupful of water; then pour to it a pint of wine, and add sugar to your taste; beat it up, and it will be ready; or it may be made of good home-made wine.

#### COFFEE MILK.

Boil a dessertspoonful of ground coffee, in nearly a pint of milk, a quarter of an hour; then put into it a shaving or two of isinglass, and clear it; let it boil a few minutes, and set it by the side of the fire to clarify. This is a very fine breakfast; it should be sweetened with sugar of a good quality.

#### ICELAND MOSS CHOCOLATE.

Iceland moss has been in the highest repute on the continent, as a most efficacious remedy in incipient pulmonary complaints; combined with chocolate, it will be found a nutritious article of diet, and may be taken as a morning and evening beverage.

*Directions.*—Mix a teaspoonful of the chocolate with a teacupful

of boiling water or milk, stirring it constantly till it is completely dissolved.

#### MILK PORRIDGE.

Make a fine gruel of cracked corn, grits, or oatmeal, long boiled; strain off; either add cold or warm milk, as may be approved. Serve with toast.

#### FRENCH MILK PORRIDGE.

Stir some oatmeal and water together, let it stand to clear, and pour off the latter; pour more water upon it; stir it well; let it stand till next day; strain through a fine sieve, and boil the water, adding milk while doing: the proportion of water must be small. This is much ordered, with toast, for the breakfast of weak persons on the continent.

#### GROUND RICE MILK.

Boil one spoonful of ground rice, rubbed down smooth, with three half pints of milk, a bit of cinnamon, lemon-peel, and nutmeg; sweeten when nearly done.

#### SAGO.

To prevent the earthy taste, soak it in cold water an hour; pour that off, and wash it well; then add more, and simmer gently till clear; flavour with lemon-peel and spice, if approved: add wine and sugar, and boil all up together.

#### SAGO MILK.

Cleanse as above, and boil it slowly, and wholly with new milk. It swells so much, that a small quantity will be sufficient for a quart; and when done, it will be diminished to about a pint. It requires no sugar or flavouring.

#### ASSES' MILK

Far surpasses any imitation of it that can be made: it should be milked into a glass that is kept warm by being in a basin of hot water. The fixed air that it contains gives some people a pain in the stomach. At first, a teaspoonful of rum may be taken with it, but should only be put in the moment it is to be swallowed.

## WATER GRUEL.

Put a large spoonful of oatmeal, or fine Indian meal, by degrees into a pint of water, and when smooth, boil it.

## ANOTHER.

Rub smooth a large spoonful of oat or fine Indian meal with two of water, and pour it into a pint, boiling on the fire; stir it well and boil it quick, but take care it does not boil over; in a quarter of an hour strain it off, and add salt and a bit of butter when eaten: stir until the butter be incorporated.

## BARLEY GRUEL.

Wash four ounces of pearl-barley; boil it in two quarts of water with a stick of cinnamon till reduced to a quart; strain, and return it into the saucepan with sugar, and three-quarters of a pint of port wine; heat up, and use as wanted.

## A VERY AGREEABLE DRINK.

Into a tumbler of fresh cold water pour a tablespoonful of capillaire, and the same of good lemon-juice.

Tamarinds, fresh or in jelly, or scalded cranberries, make excellent drinks, with or without a little sugar, as agreeable.

## A REFRESHING DRINK IN FEVERS.

Put a little tea-sage, two sprigs of balm, and a little sorrel, into a stone jug, having first washed and dried them; peel thin a small lemon, and clear from the white; slice it, and put a bit of the peel in; then pour in three pints of boiling water; sweeten, and cover it close.

## ANOTHER.

Wash extremely well an ounce of pearl-barley; shift it twice, then put it to three pints of water, an ounce of sweet almonds beaten fine, and a bit of lemon-peel; boil till you have a smooth liquor; then put in a little syrup of lemons and capillaire.

## ANOTHER.

Boil three pints of water with an ounce and a half of tamarinds, three ounces of cranberries, and two ounces of stoned raisins, till



near a third be consumed; strain it on a bit of lemon-peel, which remove in an hour, as it gives a bitter taste if left long.

#### A VERY PLEASANT DRINK.

Put a tea-cupful of cranberries into a cup of water, and mash them. In the mean time boil two quarts of water with one large spoonful of corn or oatmeal and a bit of lemon-peel; then add the cranberries; as much fine sugar as shall leave a smart flavour of the fruit, and a quarter of a pint of sherry, or less, as may be proper: boil all for half an hour, and strain off.

#### A DRAUGHT FOR COUGH AND DEBILITY.

Beat a fresh-laid egg, and mix it with a quarter of a pint of new milk warmed, a large spoonful of capillaire or vinegar, the same of rose-water, and a little nutmeg seraped. Do not warm it after the egg is put in.

#### TOAST AND WATER.

Toast slowly a thin piece of bread till extremely brown and hard, but not the least black; then plunge it into a jug of cold water, and cover it over an hour before used. This is very serviceable in weak bowels. It should be of a fine brown colour before drinking it. Or, when the bread is ready, pour boiling water over it, and let it stand until cool.

#### BARLEY WATER.

Wash a handful of common barley, then simmer it gently in three pints of water with a bit of lemon-peel.

#### ANOTHER.

Boil an ounce of pearl-barley a few minutes to cleanse, then put on it a quart of water; simmer an hour: when half done, put into it a bit of fresh lemon-peel and one bit of sugar. If likely to be too thick, you may put another quarter of a pint of water. Lemon-juice may be added, if approved.

#### LEMON WATER, AN EXCELLENT DRINK.

Put two slices of lemon thinly pared into a teapot, a little bit of the peel, and a bit of sugar; pour in a pint of boiling water, and cover it close two hours.

## APPLE WATER.

Cut two large apples in slices, and pour a quart of boiling water on them; or on roasted apples: strain in two or three hours, and sweeten lightly.

## WHITE WINE WHEY.

Put half a pint of new milk on the fire; the moment it boils up, pour in as much sound raisin-wine as will completely turn it, and it looks clear; let it boil up; then set the saucepan aside till the curd subsides, and do not stir it. Pour the whey off, and add to it half a pint of boiling water, and a bit of white sugar. Thus you will have a whey perfectly cleared of milky particles, and as weak as you choose to make it.

## LEMON WHEY.

Pour into boiling milk as much lemon-juice as will make a small quantity quite clear; dilute with hot water to an agreeable smart acid, and put a bit or two of sugar. This is less heating than if made of wine; and, if only to excite perspiration, answers as well.

## SWEET BUTTERMILK.

Take the milk from the cow into a small churn; in about ten minutes begin churning, and continue till the flakes of butter swim about pretty thick, and the milk is discharged of all the greasy particles, and appears thin and blue; strain it through a sieve, and drink it as frequently as possible. It should form the whole of the patient's drink, and the food should be biscuits and rusks, in every way and sort; ripe and dried fruits of various kinds, when a decline is apprehended; raisins in particular (of all baked or dried fruits) make excellent suppers for invalids, with biscuits or common cakes.

## ORGEAT.

Beat two ounces of almonds with a teaspoonful of orange-flower water and a bitter almond or two, then pour a quart of milk and water to the paste; sweeten with sugar or capillaire. This is an excellent drink for those who have a tender chest; and in the gout it is highly useful; and, with the addition of half an ounce of gum arabic, has been found to allay the painfulness of the attendant heat. Half a glass of brandy may be added if thought

too cooling in the latter complaints, and the glass of orgeat may be put into a basin of warm water.

## ORANGEADE, OR LEMONADE.

Squeeze the juice; pour boiling water on a little of the peel, and cover close; boil water and sugar to a thin syrup, and skim it. When all are cold, mix the juice, the infusion, and the syrup, with as much more water as will make a rich sherbet; strain through a jelly-bag. Or, squeeze the juice, and strain it, and add water and capillaire.

## EGG WINE.

Beat an egg; mix it with a spoonful of cold water; set on the fire a glass of white wine, half a glass of water, sugar, and nutmeg. When it boils, pour a little of it to the egg by degrees, till the whole be in, stirring it well; then return the whole into the saucepan, put it on a gentle fire; stir it one way for not more than a minute; for if it boil, or the egg be stale, it will curdle. Serve with toast.

Egg wine may be made as above, without warming the egg, and it is then lighter on the stomach, though not so pleasant to the taste.

# BATHING.

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THE simplest and most natural division of baths is into *hot* and *cold*; the former comprehending all those which occasion the feeling of heat, the latter, all which communicate the sensation of cold. The following arrangement of baths according to temperature is likely to be generally useful:—

- |                                 |             |
|---------------------------------|-------------|
| 1. The cold bath . . . . .      | 60° to 70°  |
| 2. The temperate bath . . . . . | 75° to 85°  |
| 3. The tepid bath . . . . .     | 85° to 92°  |
| 4. The warm bath . . . . .      | 92° to 98°  |
| 5. The hot bath . . . . .       | 98° to 112° |
- 

## GENERAL OBSERVATIONS ON BATHING.

### THE COLD BATH.

It is of essential importance to know that there is no truth in the vulgar opinion, that it is safer to enter the water when the body is cool, and that persons heated by exercise, and beginning to perspire, should wait till they are perfectly cooled. It is a rule liable to no exception, that moderate exercise ought always to precede cold bathing; for neither previous rest, nor exercise to a violent degree, is proper on this occasion. The duration of cold bathing ought to be short, and must be determined by the constitution and sensations of the individual, for healthy persons may continue in it much longer than valetudinarians. It should, however, not be forgotten that it is safer to continue completely immersed in water during a short time, than to take repeated plunges. The morning is the usual time for using the cold bath, unless it be in a river; in which case the afternoon will be more eligible. While the bather is in the water he should not remain inactive, but apply brisk and general friction. After the bath the body should be immediately dried with a coarse dry cloth.

The beneficial effects of cold bathing may be considered to be ablution or cleansing of the skin, the reduction of excessive heat, and a salutary reaction of the system, upon which its tonic power depends.

The cold bath is well calculated to brace the constitution during the middle periods of life, when the powers of the body are firmly established, provided no predisposition to visceral or cutaneous diseases exists.

The cold bath is often resorted to as a tonic with children. Bathing in the open sea is its best form, but the child should not be plunged, as is too often the case, under water in such sudden and quick successions as almost to deprive it of breath. The use of cold bathing with children is to be directed on the same principles as for the adult.

As a preventive of the numerous diseases produced by cold, or rather by variations of temperature, the cold bath excels all other measures. In the numerous variations of catarrhal disorders it is frequently of extreme value. It obviously acts, too, in warding off these diseases: in the first place, as a tonic to the whole system, thereby rendering it less easily affected by deleterious influences from without. Secondly, it strengthens, in a peculiar manner, the skin and the mucous membranes of the air-passages, on which part the morbid impressions producing catarrh are generally made. In the third place, by accustoming the surface to a frequent change of temperature, it renders it less liable to suffer from those which are unavoidable, and which are known to be the common causes of colds. The same observations apply, in a great measure, to rheumatism, chilblains, and other diseases produced by the same causes.

#### THE WARM BATH.

The temperature of this bath is between 92° and 98° Fahrenheit. It is applicable almost to every purpose for which *warm* bathing is indicated, with the exception of a few cases which demand the use of the *hot* bath. The warm water bath was employed for medicinal purposes, and indulged in as a luxury, in the earliest ages of society. During the periods of puberty, so critical to the female constitution, it will be found eminently serviceable in maturing the organs, in establishing the balance of circulation, and in diminishing that irritability of the system so productive of nervous disorders. The best time for employing the warm bath is the evening, that the invalid may go to bed immediately afterwards, to assist its operation.

The warm bath is employed with infants to soothe irritation, allay pain, induce rest, and subdue febrile action. To effect the latter object, however, its use must be cautiously had recourse to; no remedy, perhaps, is more abused than the warm bath with infants. The temperature of a warm bath for a child should never exceed 98°.

The following are a few of the cases in which the warm bath is highly beneficial:—

1. In fatigue after great muscular exertion, particularly if long continued; in those cases the body should be allowed time to cool before the bath is taken, and the temperature of this should not be higher than is absolutely necessary to produce the desired effects. In general 94°, 95°, or 96° will be sufficiently high.

2. After a long journey, more particularly in the case of persons of a delicate or feverish habit. Travelling for several successive days, even in the easiest carriages, and on the best roads, produces, in almost every person, dryness of skin, irregular distribution of blood, defective secretion and excretion, general irritation of the nervous system, and a slight degree of feverish heat: in all such cases the warm bath is an invaluable remedy.

3. After long-continued mental excitement and loss of sleep, as in studious labours; and after great bodily exertion and activity of the external senses, as many departments of public and professional life impose, the warm bath is very beneficial.

The warm bath is of essential benefit in many *diseases*, but it is unnecessary here to speak of bathing *medicinally*, the only object being to offer a few suggestions for the guidance of persons in health.

PERIOD OF STAY IN THE BATH.—Speaking *generally*, a quarter of an hour may be said to be the shortest period, an hour the longest, and twenty-five minutes to half an hour the medium.

#### THE TEPID BATH.

This bath consists of water of a temperature from 86° to 92°. At 86° water scarcely feels warm, and certainly exerts no stimulant influence on the skin, and is rather to be regarded as a refrigerant than a diaphoretic. At 92° the warmth is agreeable, and the effects on the habit are soothing. It is, therefore, well fitted to cleanse the skin from any impurity which may adhere to it, and thus to promote its natural secretion. In the early periods of infancy it is highly beneficial, by facilitating the development of the corporeal organs, and by maintaining the skin in that state of softness and perspirability which diminishes the danger of



teething, and of the various convulsive and cutaneous diseases to which children are liable. Sir A. Clarke recommends the use of the tepid bath during pregnancy, as frequently affording great comfort and relief at this period.

The effects of the tepid bath are similar in kind to those of the warm bath, but inferior in degree. The tepid bath is less pleasant, less animating, less soothing; it possesses neither the direct stimulus of the warm, nor the indirect stimulus of the cold bath, and in its medical effects may be said to occupy a middle position between the temperate and warm baths.

#### THE HOT BATH.

The application of the hot bath is exclusively therapeutical, and its employment, consequently, circumscribed; the propriety of its use must, therefore, be determined by the practitioner.

#### THE VAPOUR BATH.

The simple vapour bath is a powerful auxiliary to medicine in cases of fever, where perspiration is particularly desirable. In inflammation of the lungs, the stomach, bowels, or any other internal part of the chest or abdomen; in rheumatism, and in a variety of diseases of the skin, this bath will prove of essential service. The temperature of the vapour bath may be from 110 to 120 degrees; and the time for continuing in it from ten to forty minutes, according to the circumstances of the case.

The vapour bath, in which the head is not included, may be said to be applicable in the same cases as the warm bath. It seems, however, to have a less soothing effect on the nervous system.

#### THE MEDICATED VAPOUR BATH.

Is prepared by impregnating aqueous vapour with the odour of medicinal plants. There is no good reason, however, for supposing that it possesses any advantage over the simple vapour bath.

#### SEA WATER BATH.

The topical action of sea water is more stimulant than common water, and, employed as a bath, it more speedily and certainly causes the reaction and glow, and, consequently, the sea water bath may be used for a longer period, without causing exhaustion, than the common water bath. It is a popular opinion, which is perhaps well founded, that patients are less liable to take cold

after the use of salt water, as a bath, than after the use of common water.

#### ARTIFICIAL SEA WATER BATH.

A solution of one part of common salt in thirty parts of water is a cheap substitute for a sea water bath. When, however, a more faithful imitation of sea water is desired, the following formula, founded on Mareet's analysis, may be relied on:—

Common Salt . . . . .	390 grains.
Sulphate of Soda (crystals) . . . . .	172 grains.
Chloride of Calcium (crystals) . . . . .	36 grains.
Chloride of Magnesium (crystals) . . . . .	144 grains.
Iodide of Potassium . . . . .	1 grain.
Bromide of Potassium . . . . .	1 grain.
Water . . . . .	1 wine quart.

This imitation is perfect.

The following remarks on "Sea Bathing" are compressed from an able article which recently appeared in *The London Lancet*:—

#### THE COLD SEA BATH

Is a therapeutic agent, not only of immense power, but it admits of no substitute: it will accomplish what no other remedy will effect. On the other hand, a cold plunge, indiscreetly resorted to in visceral disease, may prove to be a plunge into eternity. For these reasons the cold sea bath should only be used (by invalids) under special medical direction. Nor is any medical practitioner justified in giving directions for its use, unless he have a practical acquaintance, not only with the morbid conditions which it is calculated to rectify, but with all the circumstances which indicate or contraindicate its use—with the requisite dose or frequency of repetition—with the signs of an over-dose or excessive use—and with the indications for perseverance in its use on the one hand, or for its discontinuance on the other. All this is considered essential in administering a drug, and it holds with equal force in reference to a bath. Yet the use of the cold bath, as a remedy for disease, is, perhaps, less understood by the profession than any agent of equal power. The conditions of its administration, not less than the effects of its abuse, are alike subjects on which erroneous views extensively prevail.

There are reasons for this deficiency of knowledge, which go far both to explain and excuse it. In the first place, a comparatively small number only of the practitioners of these islands have

opportunities of witnessing and watching the operation of the cold sea bath—those, namely, who are located at marine watering-places. Their inland brethren cannot be expected to take much interest in the study of a subject which to them must be purely theoretical. Nor is it at all necessary that they should do so. I only entreat them, as they value human life, to abstain from prescribing, at random, a remedy of which they cannot understand the value; and to admonish their patients visiting the coast not to consign their health to the care of the ignorant proprietors of bathing-machines, or their more ignorant "*guides*." As well might a lancet be plunged into the vein of a patient at the dictum of the instrument maker, or calomel be administered under the advice of the laboratory man, as for such persons to have the direction of this powerful remedy. So far as disease is concerned, every bathing establishment should be under medical superintendence. And as every watering place may be supposed to contain medical practitioners who are practically acquainted with the subject, there can be no excuse whatever for the encouragement of the form of hydropathic quackery above described.

The application of cold sea water to the surface of the body may be either partial or general. The general bath—the whole body being immersed—is useful, first, as a stimulus to the skin, restoring its functions when they are deranged; secondly, as a stimulus to other organs which sympathize with the skin, their functions being imperfectly performed; and thirdly, as a general tonic to the whole system. When the skin is the subject of inflammatory disease, in whatever form of eruption, benefit is rarely to be expected from immersion in the sea. On the contrary, I have generally found the irritation increased by it, especially in squamous affections. It is sometimes useful where disease occurs in the asthenic type, as in ecthyma; but here the bath acts rather as a general tonic than as a local stimulant. Where the circulation is feeble, and there is either a relaxed condition of the capillaries, with excessive perspiration, or a deficient exhalation from inaction, a cautious use of sea bathing is often found highly beneficial. Upon the whole, however, the main advantage of sea bathing is seen in cases of constitutional feebleness, in strumous habits, in dyspepsia, in a low dormant condition of the nervous system, and in habits generally relaxed from excessive fatigue, anxiety, fevers, or other causes. Its operation in these cases is well marked, especially when tonics, country air, and other restoratives, have failed. The reputation of this remedy in these depressed conditions of the system will rise much higher when its administration shall have been brought more completely under

the regulation of enlightened management, rather than committed to the vague chances of empirical routine.

The symptoms which specially indicate the use of the cold sea bath are those of general debility, unattended with organic disease—a general and prevailing sense of lassitude, aching pains in the back or limbs, low spirits, a languid circulation, and defective appetite. After a plunge into the sea, the patient experiences a refreshing sense of returning vigour, a general glow on the surface, cheerful spirits, an improved appetite, and a corresponding relief to the muscular pains.

How is this benefit to be explained? Possibly, too much credit is often given to the salt contained in the water. The quantity which can enter the system by absorption must be far too small to be effective. Twenty times as much is generally swallowed at each bath, without producing any sensible effect on the stomach. Indeed, if there were any intrinsic efficacy in the salt, a salt bath might be procured in London or elsewhere. The grand benefit of sea bathing, in contradistinction from fresh water ablutions, results from the circumstance that sea water is in the locality of the seaside, where the purity of the air (and, perhaps, its impregnation with iodine and muriatic acid gas), the relaxation from the toils of business and the enervating habits of civic or fashionable life, and the thousand and one effects of change of air, all tend to promote the general health. So much advantage, indeed, is often derived from these sources, even when bathing is not practised at all, that it is, in honest truth, extremely difficult to determine exactly what share of credit the bathing can actually claim when it is had recourse to. Yet, as the patient feels particularly invigorated immediately after the bath, it is but fair to conclude that it has done him good. In what way it acts on the physical frame I cannot explain. It first checks the cutaneous circulation, and then, by reaction, quickens it: but why should this be beneficial? It is sufficient for practical purposes to reply, that good generally comes of it under certain conditions. What are these conditions?

The bath is sometimes prejudicial. Chilliness may succeed it, instead of the well-known salutary glow. Cold extremities, livid lips, a pale surface, pain in the chest, palpitation of the heart, headache, giddiness, bleeding at the nose, and suppressed secretions; all these symptoms, the symptoms of an over-dose, I have repeatedly observed after cold bathing, even in cases in which the patient was previously in good health, or at least in a condition favourable for the cold bath. It is more easy to explain why the

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with the same. In the winter, the bath may be used warm; but this is not necessary in the summer. The bath may be used daily, or more frequently, according to the exigency of the disease.

Sir James Annesley has used extensively the nitro-muriatic bath, and directs it to be made in the following manner. To eight ounces of pure water add four of nitric and four of muriatic acid, of the strength of the London Pharmacopœia. To form a bath of this solution, take from two ounces to five, according to the strength of the patient, and mix with from two and a half to three gallons of warm water, of a temperature nearly approaching that of the blood. The feet and legs should be immersed for about twenty or thirty minutes every night before going to rest, and should no itching or pricking sensation be produced, the bath should be strengthened. Sponging the body with the solution in the form of a lotion has, perhaps, been more serviceable than the bath itself. Two to three drachms of the solution should be added to a pint of warm water, and the body and limbs sponged with this for a quarter of an hour daily. The lotion has been used with advantage in the form of a poultice or as a fomentation in some cases of chronic inflammation of the liver. (*See Annesley's Researches on the more Prevalent Diseases of India, second edition, 8vo. Lond. 1841.*)



## A GLOSSARY,

EXPLAINING SOME OF THE PRINCIPAL TERMS USED IN THE  
BODY OF THE WORK.

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- ALTERATIVES.** Medicines which gradually re-establish health, without producing any sensible evacuation.
- ANTIPHLOGISTIC.** Medicines or diet which remove or oppose inflammation.
- ANTISEPTIC.** Medicines which have the power of preventing animal substances from passing into a state of putrefaction, or of arresting this change when already begun.
- ANTISYPHILITIC.** Medicines calculated to remove syphilis.
- ANTISPASMODIC.** Medicines which prevent or allay spasms, vulgarly called cramp.
- APERIENT.** Medicines which gently open the bowels.
- ANODYNE.** That which eases pain, and procures sleep.
- ANTACID.** Medicines which obviate acidity in the stomach, by combining with the acid met with there, and neutralizing it.
- ABSORBENT.** Medicines given to counteract or correct acidity in the stomach and intestinal canal are termed absorbents.
- ANTIDOTES.** Medicines which are capable of averting the ill effects of disease, of a poison, or of counteracting its fatal virulence.
- ANTISCORBUTIC.** Remedies against scurvy.
- ASTRINGENT.** Such remedies as contract the fibres of the body, diminish excessive discharges, &c.
- ANTHELMINTIC.** Medicines which have the power of destroying and expelling worms.
- AROMATICS.** Medicines which have a grateful spicy scent, and an agreeable pungent taste.
- CARMINATIVE.** Medicines which relieve flatulence, and allay pain in the stomach and bowels.
- CATHARTIC.** Purgative medicines.
- CORDIALS.** Medicines of warm and exhilarating properties.
- DIAPHORETICS.** Medicines which promote perspiration.
- DEMULCENTS.** Medicines of a softening character, which correct acrimony and diminish irritation.
- DETERGENTS.** Medicines which cleanse and remove such viscid humours as adhere and obstruct the vessels.

**DISCUTIENT.** A term in surgery applied to those substances which, when applied to an ulcer or wound, promotes suppuration.

**DILUENTS.** Watery liquors, which increase the fluidity of the blood, and render several of the secreted and excreted fluids less viscid.

**DIURETICS.** Medicines which act upon the kidneys and bladder and increase the flow of urine.

**DRASTICS.** Purgatives of a strong and violent character.

**EMOLLIENTS.** Those substances which have the power of softening or relaxing the animal fibre.

**EMMENAGOGUES.** Medicines possessing a power of promoting that monthly discharge which, from a law of the animal economy, should take place in certain conditions of the female system.

**EXPECTORANTS.** Medicines which increase the discharge from the lungs, throat, and chest.

**FEBRIFUGE.** Medicines which remove fevers.

**LAXATIVES.** Medicines which render the bowels rather more relaxed than natural.

**NARCOTICS.** Medicines which ease pain, and procure sleep.

**RUBEFACIENTS.** Applications which redden the skin, and thereby cause a determination to the part.

**SEDATIVES.** *See Anodynes.*

**STOMACHICS.** Medicines which support and renovate the tone of the stomach, and render its action healthy.

**STYPTIC.** A term given to those substances which, when applied locally, have the power of checking hemorrhage, or the loss of blood.

**SUDORIFIC.** *See Diaphoretic.*

**TONIC.** Medicines which give general strength to the constitution, and restore the natural energy.

# INDEX.

- Abrasion of the skin, 312  
 Abscess within the ears, 173  
 Absorbents, 18  
 Accumulative powers of medicine, 17  
 Acids, 18  
 Acid, acetic, 26  
     external application of, 26  
     vesication by, 26  
     use of, in syncope, 26  
     citric, 26  
     muriatic, 27  
         administration of, 28  
         gargle of, 27  
         linctus of, 28  
         ointment of, 28  
     nitric, 28  
         uses and action of, 28  
         dilute, 29  
             dose of, 29  
             uses of, 29  
         mixture of, 29  
     nitro-muriatic, 29  
     pyroligneous, 30  
     sulphuric, 30  
     tartaric, 31  
     whcy, 384  
 Adaptation of medicinal doses to different ages, 16  
 Adhesive plaster, 32  
 Administration of medicines, 24  
 Advantages of maternal nursing, 187  
 Affections of the chest, diet in, 373  
 Ague, 114  
     symptoms of, 114  
     treatment of, 115  
 Air and exercise during infancy, 249  
 Aliments, fluid, 358  
 Alkalies, 18  
 Aloes, Barbadoes, 33  
     socotrine, 33  
 Aloetic pills, 34  
 Alum, 34  
 Alum gargle for relaxed uvula, 35  
 Aluminous whey, 384  
 Ammonia, 36  
 Angina, diet in, 375  
 Animal food, 224  
     preparations, 382  
     poisons, 318  
 Ankle-joint, dislocation of, 266  
 Anodynes, 18  
 Antacids, 19  
 Anthelmintics, 19  
 Antilithics, 19  
 Antimonial powder, 36  
     wine, 37  
 Antiseptics, 19  
 Antispasmodics, 19  
 Antispasmodic pills, 57  
 Apartments for children, 231  
 Aperients, 20  
 Aperient pills, 59  
 Aphthous ulceration, 167  
 Apoplexy, 116  
     causes of, 116  
     diet in, 372  
     symptoms of, 116  
     treatment of, 116  
 Apothecaries' weights, 14  
 Apple water, 392  
 Apportionment of doses, Dr. Young's rule of, 16  
 Approximate value of French decimal weights, 15  
 Arrow-root, 37, 219  
 Arsenic, poisoning by, 315  
 Artificial food, 197, 213  
 Asparagus, 226  
 Asses' milk, 37, 214  
 Assafœtida, 37

- Asthma, 117  
     treatment of, 117  
 Atmosphere, impure, effects of, on  
     children, 232  
 Atonic dyspepsia, 376  
 Balsam, copaiva, 38  
     emulsion of, 38  
     uses of, 38  
 Barbadoes aloes, 33  
 Barley gruel, 390  
 Barley water comp., 84  
 Bark, Peruvian, 39  
 Bath, cold, 394  
     cold sea, 398  
     hot, 397  
     medicated, 404  
     nitro-muriatic, 404  
     shower, 404  
     temperate, 394  
     tepid, 396  
     vapour, 397  
     warm, 395  
 Bathing, 241, 394  
 Battley's solution of opium, 39  
 Beef-tea, 382  
 Beer-whey, 384  
 Belladonna, poisoning by, 316  
 Black drop, 39  
     draught, 92  
 Bleeding from the nose, 120  
 Blisters, 39  
     mode of applying and dressing, 40  
 Bloodletting, 117  
 Blood, spitting of, 163  
     vomiting of, 162  
 Blue pill, 39  
 Blue stone, 49  
 Boat accidents, 314  
 Boils, 118  
     gum, 118  
 Bones of the foot, fracture of, 277  
 Borax, 41  
     gargle of, 41  
 Bowel, protrusion of, 178  
 Breast, irritable, 297  
 Broken bones, 277  
     management of, 268  
 Bruises and sprains, 120, 312, 314  
 Buchu leaves, 42  
 Bunions, 261  
 Burns and scalds, 119, 259, 313  
 Buttermilk, 385  
 Calomel, 42  
     administration and dose of, 43  
 Camphor, 43  
     administration of, 43  
     uses of, 43  
 Camphorated sal volatile, 44  
 Carminatives, 19  
 Carminative mixture, 20  
     Dalby's, 51  
     Dewees's, 52  
 Carrageen, 45  
     decoction of, 46  
 Capillaire, 44  
 Carrot, 226  
 Cases in which the use of ether is not  
     admissible, 32  
 Castor oil, 46  
     emulsion of, 46  
     biscuits, 47  
 Catarrh, 120  
 Cathartics, 20  
 Cathartic draught, 20  
 Caudle, 387  
     of flour, 388  
     rice, 388  
 Cauliflower, 226  
 Chamomile flowers, 49  
     tea, 49  
 Chalk, prepared, 47  
 Charcoal, levigated, 47  
 Changes caused by climate in the  
     animal frame, and on vegetable  
     medicines, 17  
 Chicken tea, 382  
     panada, 386  
     pock, 168  
 Chemicals, 26  
 Chilblains, 121  
     treatment of, 121  
 Chin cough, 173  
 Chlorine, 48  
     objections to use of, 48  
 Chloride of soda, 325  
 Chlorosis, 147  
     diet in, 371  
 Choice of a wet-nurse, 207  
 Chordee, 307  
 Cholera, infantile, 168  
     Asiatic, 124  
     symptoms of, 124  
     treatment of, 125  
     morbus, 122  
     symptoms of, 122  
     treatment of, 122  
 Clap, 301  
     symptoms of, 301  
     treatment of, 303  
 Cleanliness in nursing, 238  
 Clothing of infants, 245  
 Clothes catching fire, 314  
 Cochineal, 49  
     formula for, 49  
 Cocoa, 362  
 Coffee, 362



- Colchicum, 50
  - seed, wine of, 50
  - poisoning by, 316
- Collar bone, dislocation of, 262
  - fracture of, 270
- Colomba, 44
  - infusion of, 45
- Colocynth, 50
- Coma, 349
- Compound barley-water, 84
  - fractures, 277
- Constituents of human milk, 214
- Contused wounds, 284
- Convulsions, 168, 349
- Cookery for the sick-room, 381
- Copper, poisoning by, 317
- Corns and bunions, 261
- Corrosive sublimate, poisoning by, 315
- Costiveness, 127
  - in children, 169
- Cough, 128
  - linctus, 22
- Coup de soleil, 128
- Cow's milk, 215
- Cow-pock, 170
- Cramps, 129
  - treatment of, 129
- Cream of tartar, 50
  - whey, 51
- Croton oil, 51
- Croup, 170
  - diet in, 374
  - treatment of, 171
- Crystallized lemon juice, 26
- Dalby's carminative, 51
- Dandelion, 52
  - decoction of, 52
- Deficiency of milk, 202
- Delirium tremens, 129
  - causes of, 129
  - symptoms of, 129
  - treatment of, 130
- Demulcents, 21
  - administration of, 21
- Demulcent mixture, 21
- Dewees's carminative, 52
- Diamond cement, 70
- Diaphoretics, 21
- Diaphoresis, 21
- Diarrhœa, 130
  - treatment of, 131
  - in children, 171
  - diet in, 379
- Diet of a wet-nurse, 209
  - of childhood, 220
  - in disease and convalescence, 351
- Dill seed, 52
- Diluted nitric acid, 29
- Diseases of the ear, 132
  - liver, 380
- Dislocations, 262
- Dislocation of elbow joint, 263
  - collar bone, 262
  - foot and ankle joint, 266
  - hip joint, 264
    - backwards, 265
    - downwards and inwards, 265
    - upwards and inwards, 266
  - knee pan, 266
  - lower jaw, 262
  - shoulder, 263
  - wrist bone, 264
- Distilled water, 53
- Diuretics, 21
- Domestic surgery, 256
- Dover's powder, 53
- Dropsy, diet in, 368
- Drugs, 26
- Drying up the milk, 206
- Dysentery, diet in, 379
  - treatment of, 132
- Dysmenorrhœa, 148
- Ear, diseases of, 132
  - inflammation of, 132
- Egg wine, 393
- Elatarium, 58
- Elbow joint, dislocation of, 263
- Elixir of vitriol, 53
- Emetics, 22
- Emetic mixture, 109
- Emmenagogues, 22
- Eminagogue mixture, 22
- Enemata, 54
- Enteritis, diet in, 377
- Epilepsy, 133
  - treatment of, 133, 313
- Epsom salts, 54
- Eruptive fevers, diet in, 365
- Erysipelas, diet in, 366
  - symptoms of, 134
  - treatment of, 134
- Essence d'orient, 70
- Exercise during infancy, 249
- Expectorants, 22
- Extract of aloes, 55
  - chamomile, 55
  - dandelion, 55
  - gentian, 55
  - hemlock, 56
- Extract of henbane, 57
  - hops, 58
  - jalap, 58
  - lettuce, 58
  - logwood, 58
  - opium, 59
  - ox-gall, 59

- Eye, inflammation of, 293  
     pustules on, 294  
 Fainting, 135  
     treatment of, 135  
 Farinaceous food, Hard's, 218  
 Flatulency, 136  
 Fluid aliments, 358  
 Fluor albus, 165  
     treatment of, 166  
 Food suitable after first dentition, 218  
 Foot, dislocation of, 266  
 Fractures, 267  
 Fracture of collar-bone, 270  
     bones of foot, 277  
     fore-arm, 272  
     fingers, 272  
     hand, 272  
     knee-pan, 276  
     leg, 276  
     pelvis, 273  
     ribs, 272  
     skull, 269  
     thigh-bone, 273  
     upper-arm, 270  
 Fresh fruits, 227  
 Fumigation of infected chambers, 324  
     with the chlorides, 324  
 Galls, 59  
     ointment of, 59  
 Gamboge, 60  
 Garlic, 60  
 Gelatine, 60  
 General management of children up to  
     the second year, 231  
 Gentian, 61  
     compound mixture of, 61  
 Ginger, 61  
     beer, 61  
 Glossary, 406  
 Goitre, 164  
 Gonorrhœa, 301  
 Goulard's extract, 62  
     water, 62  
 Gout, 136  
     diet in, 369  
     treatment of, 137  
 Gravel and stone, 138  
     treatment of, 138  
 Green sickness, 147  
 Gruel, 361  
 Gum arabic, 62  
 Guaiacum, 63  
 Hand, fracture of, 273  
 Hard's farinaceous food, 218  
 Hartshorn shavings, 63  
     spirits of, 63  
 Headache, 139  
     treatment of, 139  
 Heartburn, 140  
 Hellebore, 64  
 Hemlock, poisoning by, 316  
 Hemorrhage, treatment of, 297  
 Henbane, poisoning by, 316  
 Hiccough, 173  
 Hill's balsam, 64  
 Hip-joint, dislocation of, 264  
 Hoffman's anodyne, 65  
 Honey, 64  
 Hooping-cough, 173  
 Hops, 64  
 Horehound, 65  
     tea, 66  
 Hydriodate of potash, 66  
 Hydrophobia, 319  
 Hysteria, diet in, 367  
 Iceland moss, 66  
     decoction of, 66  
     jelly of, 66  
 Idiosyncrasy, 17  
     effects of, 17  
 Incontinence of urine, 140  
 Incised wounds, 282  
 Indian pink, 66  
 Indigestion, 141  
 Infantile diseases, 167  
     cholera, 168  
 Inflammation of the ear, 132  
     eye, 293  
 Inflammatory sore throat, 140  
 Influence of sex on operation of medi-  
     cines, 16  
     climate, 17  
     disease, 17  
     idiosyncrasy, 17  
     habit, 16  
     temperament, 16  
 Ingrowing nail, 292  
 Inquiries concerning the sick-room, 327  
 Intermittent fever, 114  
     symptoms of, 114  
     treatment of, 115  
 Iodine, 67  
 Ipecacuanha, 67  
     mixture, 68  
 Iron, 68  
 Irritable breast, 297  
 Isinglass, 69  
     solution of, 69  
 Itch, 145  
     treatment of, 145  
 Jalap, 70  
 Jaundice, 146  
     treatment of, 146

- King's cup, 27  
 Knee-pan, dislocation of, 266  
     fracture of, 276  
 Kreosote, 71  
  
 Lacerated wounds, 283  
 Lactucarium, 72  
 Laudanum, 72  
 Laxative pills, 20  
 Lead, poisoning by, 317  
 Leeches, 75  
     application of, 75  
     hemorrhage from, 75  
 Leg, fracture of, 276  
 Lemonade, 31  
 Lemon-juice, 72  
     in scurvy, 73  
     artificial, 74  
     whey, 392  
 Lenitive electuary, 76  
 Linseed, 76  
 Locomotion of the child, 251  
 Lower jaw, dislocation of, 262  
  
 Magnesia, 76  
 Management of children in health,  
     187  
     invalids, 344  
 Manna, 77  
 Maternal nursing, 187  
 Measles, 175  
     causes of, 175  
     characteristics of, 175  
     diet in, 365  
     treatment of, 175  
 Means of fumigating infected cham-  
     bers, 324  
 Medical resources, 312  
     terms, 18  
 Medicinal properties of water, 360  
 Menses, retention of, 147  
     suppression of, 147  
 Menstruation, 146  
     painful, 148  
 Mercury with chalk, 77  
 Method of removing persons injured  
     by accident, 267  
 Milk abscess, 295  
     constitution of, 214  
     administration of, 216  
     deficiency of, 202  
     porridge, 389  
 Mindcrerus, spirit of, 77  
 Morbid corpulency, 370  
 Morphia, 78  
     poisoning by, 315  
 Mothers who ought not to suckle, 189  
 Mulled wine, 388  
 Mumps, 177  
  
 Muriatic acid, 27  
     administration of, 27  
     dose and uses of, 28  
     gargle, 27  
     linctus, 28  
     ointment, 28  
 Mustard, 78  
     poultices, 78  
     whey, 383  
 Mutton broth, 383  
 Myrrh, 78  
  
 Nail, ingrowing, 292  
 Napkins, 244  
 Narcotics, 23  
     modified by use, 23  
 Narcotic influence of sound, 23  
 Nausea, 158  
 Nettle-rash, 178  
 Nipples, sore, 296  
 Nitre, 79  
 Nitric acid, 28  
     action of, 28  
     uses of, 28  
     mixture, 29  
 Nitro-muriatic acid, 29  
     dose of, 29  
     uses of, 29  
 Nitrous fumigation, 324  
 Nursing, 187  
  
 Oil of amber, 79  
     cajuput, 79  
     juniper, 80  
     vitriol, poisoning by, 316  
 Ointment, basilicon, 80  
     citrine, 80  
     mercurial, strong, 80  
     muriatic acid, 28  
     sulphur, 81  
     zinc, 81  
 Opium, 81  
     administration of, 81  
     poisoning by, 315  
     properties of, 81  
 Opodeldoc, 83  
 Orangeade, 393  
 Orange whey, 384  
 Ovarian disease, 350  
 Oxalic acid, poisoning by, 316  
 Oxymer of squills, 83  
  
 Palsy, diet in, 368  
 Panada, 385  
 Paregoric elixir, 83  
 Pearl barley, 83  
 Peas meal, 226  
 Pectorals, 22  
 Pelvis, fracture of, 273

- Pharmaceutical instruments, 15  
 Pickling vinegar (No. 22), 30  
     (No. 24), 30  
 Piles, 148, 288  
     treatment of, 148  
 Plaster, adhesive, 84  
     diachylon, 84  
     belladonna, 84  
     Burgundy pitch, 84  
     soap, 85  
 Poisoning by arsenic, 315  
     belladonna, 316  
     colchicum, 316  
     copper, 317  
     corrosive sublimate, 315  
     hemlock, 316  
     henbane, 316  
     lead, 317  
     mussels, 318  
     oil of vitriol, 316  
     opium, 315  
     oxalic acid, 316  
     Prussic acid, 316  
 Poisonous mushrooms, 317  
 Pomegranate bark, 85  
     peel, 85  
 Poppy heads, 85  
 Posture of children when fed, 218  
 Potash, bicarbonate of, 86  
 Potassæ, liquor, 86  
 Poultices, 86  
 Pox, 308  
 Preparation of beverages, 383  
 Prognostics, 348  
 Protracted suckling, 203  
 Protrusion of the bowels, 178, 290  
 Punctured wounds, 284  
 Purgatives, 20  
 Pustules on the eye, 294  
 Putrid sore throat, 149  
     treatment of, 149  
 Pyroligneous acid, 30  
  
 Qualifications of a nurse, 337  
 Quantity of food for infants, 217  
 Quassia, 87  
 Quince seeds, 87  
 Quinia, 87  
 Quinsy, 150  
  
 Rabies, 319  
 Rain water, 358  
 Recovery from noxious vapours, 323  
 Red-gum, 173  
 Rennet whey, 383  
 Retention of urine, 150  
 Rheumatism, 151  
     acute, 151  
     chronic, 151  
  
 Rheumatism, diet in, 369  
 Rhubarb, 88  
 Ribs, fracture of, 273  
 Rice, 226  
     caudle, 388  
 Rickets, 178  
     treatment of, 178  
 Rigors, 349  
 Ringworm, 179  
 River water, 358  
 Rochelle salt, 88  
 Roche's embrocation, 89  
 Rose leaves, 89  
 Rules for nursing infants, 192  
     health of nursing mother, 198  
     restoring suspended anima-  
         tion from drowning, &c.,  
         256  
 Ruptures, 285  
  
 Sago, 89, 219  
 Saint Anthony's fire, 152  
 Saline mixture, 27  
 Salt, utility of, 227  
 Sarsaparilla, 90  
 Savine ointment, 91  
 Scald-head, 180  
 Scalds, 259  
 Scammony, 91  
 Scarlatina, diet in, 366  
 Scarlet fever, 180  
 Sciatica, 152  
 Scurvy, 152  
     history of, 153  
     symptoms of, 153  
     treatment of, 154  
 Sea-sickness, 157  
 Seneka root, 91  
 Senna, 91  
 Shank jelly, 387  
 Shoulder, dislocation of, 263  
 Sickness of stomach, 158  
     treatment of, 158  
 Silver, nitrate of, 92  
 Skull, fracture of, 269  
 Sleep, infantile, 238  
     of children, 240  
 Small pox, 158  
     diet in, 366  
     treatment of, 159  
 Soda, bicarbonate of, 92  
     muriate of, 93  
     phosphate, 94  
     subcarbonate, 94  
 Solution of morphia, 94  
 Sore ears, 172  
     nipples, 296  
 Spasms, 129  
     treatment of, 129

- Spirits of lavender, 96
  - turpentine, 95
  - wine, rectified, 95
  - sal volatile, 96
- Spitting of blood, 163
- Sprains, 281
- Spring water, 359
  - hard, 359
  - soft, 359
- Squinting, 348
- Stroke of the sun, 128
- Strychnine, 97
- Stimulants, 23
  - employment of, 23
- Stomachic pills, 20
- Substances in the eye, 314
- Sudden bleeding, 297
- Sudorifics, 21
- Sugar, 226
  - of lead, 97
- Sulphur, 98
- Sulphuric acid, 30
  - ether, 32
- Surgery, domestic, 256
- Sweetmeats, 228
- Sweet spirits of nitre, 98
  - whey, 385
- Swelled testicle, 306
- Swine pox, 168
- Syncope, 135, 349
  - treatment of, 135
- Syphilis, 308
  - treatment of, 309
- Table of doses, 13
  - medicines, 111
  - measures, 13
  - weights, 13
- Tamarinds, 98
- Tamarind whey, 385
- Tapioca, 98
- Tartaric acid, 30
  - uses of, 31
- Tartar emetic, 99
- Tartarized soda, 88
- Tea, 361
  - balm, 361
  - beef, 382
  - chicken, 382
  - mint, 361
  - sage, 361
  - veal, 383
- Teething, 181
- Temperature of water in bathing, 242
- Thigh bone, fracture of, 273
- Thrush, 167
- Tic douloureux, 160
- Tincture of aloes, 100
  - compound, 100
- Tincture of aloes, ethereal, 100
  - assafœtida, 101
  - balsam of tolu, 101
  - bark, 101
    - Huxham's, 101
  - buchu leaves, 101
  - capsicum, 102
  - cardamoms, 102
    - compound, 102
  - cascarilla, 102
  - castor, 102
  - catechu, 102
  - colomba, 101
  - cubebs, 103
  - foxglove, 103
  - gentian, 103
  - guaiaicum, 103
  - jalap, 104
  - kino, 104
  - iron, muriated, 99
  - myrrh, 104
  - rhatany, 104
  - rhubarb, 104
  - senna, 105
  - valerian, 105
- Toast water, 361
- Tobacco, 105
- Tonics, 24
- Tonic pills, 24
- Tops and bottoms, 218
- Toothache, 160
- Tous les mois, 100
- Treatment of hemorrhage, 297
- Turner's cerate, 106
- Typhus fever, 161
  - treatment of, 162
- Upper arm, fracture of, 273
- Urine, incontinence of, 140
  - retention of, 150
- Utility of salt as an article of food, 227
- Uva ursi, 106
- Valerian root, 106
- Vanilla, 107
- Veal tea, 383
- Vegetable food, 225
- Venereal disease, 301
- Venesection, 117
- Venomous serpents, 321
- Ventilation, 233, 331
- Vinegar, 107
  - of cantharides, 108
- Vomiting of blood, 162
- Warner's gout cordial, 108
- Warts, 163
- Water, 229
  - brash, 164

- Water gruel, 390  
    in the head, 183  
Weaning, 184, 205  
Wen, 164  
Wet-nurses, 207  
Whites, 165  
    treatment of, 166  
White wine whey, 384  
Whitlow, 165, 291  
Wine, 229  
    antimonial, 108  
    of colchicum root, 109  
        seeds, 109  
    ipecacuanha, 109  
Wine of opium, 110  
Worms, 185  
Wounds, 282  
    incised, 282  
    contused, 284  
    lacerated, 283  
    punctured, 284  
Wrist, dislocation of, 264  
Young's rule of apportionment, 16  
Zinc, 110  
    sulphate of, 110

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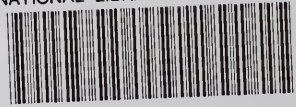
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